



# भारत का राजपत्र The Gazette of India

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इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके।  
(Separate paging is given to this Part in order that it may be filed as a separate compilation)

## भाग III—खण्ड 2

### [PART III—SECTION 2]

पेटेंट कार्यालय द्वारा जारी की गई पेटेंटों और डिजाइनों से सम्बन्धित अधिसूचनाएं और नोटिस  
[Notifications and Notices issued by the Patent Office Relating to Patents and Designs]

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Calcutta, the 13th February 1988

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## CORRIGENDUM

1. In the Gazette of India Part III Section 2 dated 1-8-87 under the heading 'Complete Specification Accepted' in Column 1 of page 886 in respect of Patent Specification No. 160750.

*Insert* Provisional Specifications 4 pages.

2. In the Gazette of India Part III Section 2 dated 1-8-87 under the heading 'Complete Specifications Accepted' in Column 1 of page 887 in respect of Patent Specification No. 160754.

*Insert* 'Complete Specification left on 16-5-86.

3. In the Gazette of India Part III Section 2 dated 1-8-87 under the heading 'Complete Specification Accepted' in Column 1 of page 890 in respect of Patent Specification No. 160764.

*Insert* 'Provisional Specification 2 pages.

4. In the Gazette of India Part III Section 2 dated 15-8-87 under the heading 'Complete Specifications Accepted' in Column 1 of page 946 in respect of Patent Specification No. 160908.

*Insert* 'Provisional Specification 7 pages.

5. In the Gazette of India Part III Section 2 dated 22-8-87 under the heading 'Complete Specification Accepted' in Column 2 of page 963 in respect of Patent Specification No. 160960.

*Insert* 'Antedated to 12-9-80.

6. In the Gazette of India Part III Section 2 dated 11-7-87 under the heading 'Complete Specification Accepted' in Column 2 of page 776 in respect of Patent Specification No. 160446.

*For* 'Complete Specification 5 pages' *Read* Complete Specification 16 pages.

7. In the Gazette of India Part III Section 2 dated 2-2-87 under the heading 'Alteration of Date'.

(i) in respect of Patent Specification No. 160973 *Insert* '160973 Antedated to 1st July 1980'.

(ii) in respect of Patent Specification No. 160960. *Insert* '160960 Antedated to 12-9-80'.

8. In the Gazette of India Part III Section 2, dated 16th August, 1986 under the heading 'Complete Specification Accepted' in Column 1 of page 513.

In respect of Patent Specification No. 157996.

*For* date of filing of Application 30th April 1982 *Read* 5th May, 1982.

#### APPLICATION FOR PATENTS FILED AT THE HEAD OFFICE 234/4, AGHARYA JAGADISH BOSE ROAD, CALCUTTA-20

The dates shown in the crescent brackets are the dates claimed under Section 135, of the Patents Act, 1970.

The 7th January, 1988

16/Cal/88. Karel Havel. Variable colour digital voltmeter.

The 8th January, 1988

17/Cal/88. Pravat Kumar Mukherji. The process of manufacturing of "Chewing Tobacco Harmless for Health"

18/Cal/88. Metallgesellschaft Aktiengesellschaft. Process of making binderless briquets from steelworks dusts.

19/Cal/88. Bridgestone Corporation. A tubular belt conveyor.

20/Cal/88. Biofutura Oy Ltd. A method for producing a preparation suitable for being used for controlling the

growth and preventing growth disturbances of plants.

The 11th January 1988

21/Cal/88. Gur Charan Saini. Compressible tea brewing device.

22/Cal/88. Metallgesellschaft Aktiengesellschaft. Process of directly reducing iron oxide-containing materials in a rotary kiln.

23/Cal/88. Siemens Aktiengesellschaft. Sealing device for a pipeline, in particular for a loop line on a steam generator hemisphere.

The 12th January, 1988

24/Cal/88. Siemens Aktiengesellschaft. Hybrid burner for a pre-mixing operation with gas and/or oil, in particular for gas turbine systems.

#### APPLICATIONS FOR PATENTS FILED IN THE PATENT OFFICE BRANCH AT TODI ESTATE, 3RD FLOOR, SUN MILL COMPOUND, LOWER PAREL (WEST) BOMBAY-13

The 10th December, 1987

358/Bom/87. The Boots Company (India) Limited.—Therapeutic Agents.

359/Bom/87. The Boots Company (India) Limited. Therapeutic Agents.

360/Bom/87. The Boots Company (India) Limited. Therapeutic Agents.

The 14th December, 1987

361/Bom/87. Bhaskar Prem Mitra. A device using solar energy named 'Solar Stove'.

362/Bom/87. Uninder Singh S. Narula & others. Automatic Rinsing Spray.

363/Bom/87. Jaysynth Dyechem Private Limited. A process for the preparation of mono novel azo reactive dyes having atleast two reactive systems.

364/Bom/87. Jaysynth Dyechem Private Limited. A process for the preparation of novel azo reactive dyes having atleast two reactive systems.

365/Bom/87. Jaysynth Dyechem Private Limited. A process for the preparation of mono and disazo reactive dyes having atleast one reactive system.

366/Bom/87. Jaysynth Dyechem Private Limited. A process for the preparation of noveltris. Azo reactive dyes having atleast two reactive systems.

367/Bom/87. Jaysynth Dyechem Private Limited. A process for the preparation of novel mono/azo reactive dyes having atleast two reactive systems.

368/Bom/87. Peico Electronics & Electricals Limited. An improved electronic frequency tuning circuitry for use in a radio frequency receiving apparatus such as radio or television.

#### APPLICATIONS FOR PATENTS FILED AT THE PATENT OFFICE BRANCH 61, WALIAJAH ROAD, MADRAS-600 002

The 28th December, 1987

930/Mas/87. Indian Institute of Science. Improvements in or relating to chromatographic packing materials and columns.

931/Mas/87. Societe Des Produits Nestle S.A. Alcohol production.

932/Mas/87. Dow Corning Corporation. A method of direct process performance improvement via control of silicon manufacture. (November 19, 1987; Canada).

933/Mas/87. Dow Corning Corporation. A method of direct process performance improvement via control of silicon manufacture. (November 19, 1987; Canada).

934/Mas/87. Merlin Gerin. Measuring circuit of the DC Component of the current flowing through the primary winding of the output transformer of an inverter.

935/Mas/87. BASF Aktiengesellschaft. Removal of water-immiscible solvents from off gases containing same.

The 29th December, 1987

936/Mas/87. Kamini Kichlu. Method for the treatment of fish and meat. (January 13, 1987; United Kingdom).

937/Mas/87. The British Petroleum Company p.l.c. Separation process. (January 16, 1987; Great Britain).

938/Mas/87. Roy Louis Abrahams. Stomp perforation gauge.

939/Mas/87. Inventio AG. Equipment for the input of travel commands for a lift.

940/Mas/87. Antibioticos S.A. Preparation of clavulanic acid and its salts and esters (Patent of Addition Division to 855/Mas/85).

The 30th December, 1987

941/Mas/87. Mobil Oil Corporation. Process for upgrading light olefins in a turbulent fluidized catalyst bed reactor.

942/Mas/87. Hoescht Aktiengesellschaft & Uhde GmbH. A process for the production of vinyl chloride by pyrolysis of 1, 2-dichloroethane.

943/Mas/87. Kabushiki Kaisha ASTEC. Method of an apparatus for treating water by donation of proton.

944/Mas/87. Robert Boach GmbH. A single-cylinder plug-in fuel injection pump for internal combustion engines.

The 31st December, 1987

945/Mas/87. Mathew Verghese. Anti-theft security and working system identification.

946/Mas/87. Dynamit Nobel Aktiengesellschaft. Process and arrangement for the production of benzene carboxylic acid or benzenec dicarboxylic acid esters.

947/Mas/87. Dr. Tanikella Sitarama Subramaniam (2) P.S.R.V.S. Vital & (3) I.T.C. Limited. A crop growth regulator composition and a method of preparing the same.

948/Mas/87. Dr. Tanikella Sitarama Subramaniam, (2) I.T.C. Limited. A botanical growth promoter composition and a method of preparing the same.

#### COMPLETE SPECIFICATION ACCEPTED

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CLASS : 127-A; 134-B.

161831

Int. Cl. F 16 d 11/00, 15/00.

FRICITION MULTI-PLATE CLUTCH FOR MOTOR-CYCLES.

Applicant : JAWA, NARODNI PODNIK, TYNEC AND SAZAVOU, CZECHOSLOVAKIA.

Inventors : 1. VLASTIMIL BLZOUSKA, 2. ING. PAVEL HUSAK.

Application No. 588/Cal/84 filed August 23, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

4 claims

A friction multi-plate clutch for motor-cycles and other vehicles seated in a box, consisting of a clutch drum carrying driving plates, carrier with driven plates, pressure disk, pressure springs and centrifugally acting weights and of a manually operated disconnecting mechanism, comprising a clutch drum in which there are slidably seated driving plates, pressure disk, a bearing plate and a control face, the driving plates being inside axially held against the clutch drum, and outside against the pressure disk, between the pressure disk and the bearing plate there are provided pressure springs and between the bearing plate and an inner shaped wall of the control face there inserted ball weights in a guide cage, and the control face is axially supported in the clutch drum, the disconnecting mechanism is formed between the pressure disk and the box.

Compl. Specn. 14 pages. 2 sheets.

CLASS : 73 & 74.

161832

Int. Cl. D 06 c 3/00.

GUIDING DEVICE FOR A CLOTH PATH.

Applicant : ERHARD & LEIMLER GmbH. LEITERSHOFER STR. 80, 8900 AUGSBURG 1, WEST GERMANY.

Inventor : 1. OTTO LORENZ, 2. HILNRICH SCHMIDT.

Application No. 646/Cal/84 filed September 14, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

16 claims

A Guiding device for a running cloth path, which has a support body for a single path on a supported back pressure roller, an adjustable drum controller, which is parallel to the said roller and perpendicular to the plane of the cloth path, by means of which the axis of the drum controller is placed on a swivel lever on one side in the support body said swivel lever being adapted to be pivoted about an axis

parallel to the said drum controller axis by a final control device operated by it against the force of a spring, characterised by the fact that the swivel lever (16) has a single arm and is placed immediately adjacent to the final control device (18) in the position (14) of the drum controller axis (7, 43), the drum controller axis (7, 43), having a balanced swivel post (10) on the inside of the longitudinal extension of the drum controller (4) whose hinge axis (11) cuts the drum controller axis (7, 43) and lies parallel to the direction of the run of the cloth path.

Compl. Specn. 17 pages.

Drgs. 4 sheets.

CLASS : 73 119-B.

161833

Int. Cl. : D 06 c 3/00.

#### EDGE FEELER FOR A MOVING CLOTH PATH.

Applicant : ERHARD & LEIMER GmbH, LEITER-SHOFFER STR. 80, 8900 AUGSBURG 1, WEST GERMANY.

Inventors : 1. HANS SEIBOLD, 2. FRANZ LOBMAIER.

Application No. 648/Cal/84 filed September 14, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

#### 27 Claims

An edge feeler for a moving cloth path, the movements of which transverse to the direction of course of the paths of cloth are adapted to scan to and then convert into signals, and which has an outer cover with at least one sensitive element, characterised in that the sensitive element (7) is a non-touch operation probing element close to which is attached a mechanical probing sensitive element (9), and that the sensitive element is adapted to (7) directly probe the edges of the cloth path (13) through a mechanical sensitive element (9), which is in a working position, and that the mechanical sensitive element (9) is capable of moving from its operating position to a passive position, during which the sensitive element (7) is adapted to indirectly scan the edges of the cloth path (13) by reflection or as per the light barrier principle.

Compl. Specn. 21 pages.

Drgs. 5 sheets.

CLASS : 156-D, E. G.

161834

Int. Cl. : F 04 b 45/00.

#### CONSTANT-FLOW-RATE DUAL-UNIT PUMP.

Applicant : F. I. DU PONT DE NEMOURS AND COMPANY, AT WILMINGTON, DELAWARE, UNITED STATES OF AMERICA.

Inventor : 1. WALTER JOHN SIMMONS.

Application No. 665/Cal/84 filed September 21, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

#### 6 Claims

In a dual-unit pump wherein each unit has a housing divided by a sealing means into a variable-volume working-liquid chamber and a complementary variable-volume delivery-liquid (product) chamber, wherein product is discharged from one of said units while the other unit is being filled with product, and wherein the discharge of product is alternately switched from one of said units to the other, the improvement comprising :

- (a) means for controlling the flow of liquids to and from said chambers in a manner such that delivery liquid is admitted to one of said housings, and working liquid discharged therefrom (filling cycle),

while working liquid is being admitted to, and delivery liquid discharged from, the other (discharge cycle) at rates such that the filling cycle in one of said housings is completed before the discharge cycle is completed in the other, said flow control means being adapted to be activated so as to alternately switch the flow of delivery and working liquids to and from said housings from one housing to the other with essentially no volume change in the liquid flow lines;

- (b) sensing means for detecting a liquid pressure differential in said two housings at the end of the filling cycle; and

- (c) means for equalizing the liquid pressure in said two housings, said pressure-equalizing means (1) being activated in response to the detection of a pressure differential by said sensing means and (2) being adapted to complete the pressure equalization before the liquid flow control means are activated to switch the flow of delivery and working liquids to and from said housing from one housing to the other.

Compl. Specn. 22 pages.

Drgs. 6 sheets.

CLASS : 40-B.

161835

Int. Cl. : B 01 j 11/00.

#### A PROCESS OF MANUFACTURE OF DEHYDROGENATION CATALYST FOR CONVERSION OF ETHYL ALCOHOL TO ACETALDEHYDE.

Applicant : PROJECTS & DEVELOPMENT INDIA LTD. (FORMERLY KNOWN AS THE FERTILIZER (PLANNING & DEVELOPMENT) INDIA LTD. C.I.F.T. BLDG., P. O. SINDRI, DIST. DHANBAD, BIHAR, INDIA.

Inventors : 1. MON MOHAN SINGH CHHABRA, 2. DR. BANSI LOCHAN SINGH YADAV, 3. DR. DINA NATH, 4. MANI BHUSAN BHATTACHARYYA, 5. SANKAR PRASAD SEN.

Application No. 672/Cal/84 filed September 24, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

#### 11 claims

An improved process for the manufacture of dehydrogenation catalyst for conversion of ethyl alcohol to acetaldehyde based on copper oxide supported on kieselguhr characterized by the steps of purification of kieselguhr by drying and washing with dilute nitric acid, followed by precipitation in a known manner of copper oxide from an aqueous solution of a salt thereof on said suspended kieselguhr in the presence of the said alkaline medium, thereafter recovering the precipitated copper oxide with kieselguhr, whereafter the obtained mass is dried in a closed chamber with air circulation and finally granulated to a dry cake and then tabletted.

Compl. Specn. 21 pages.

Drg Nil.

CLASS : 34-D.

161836

Int. Cl. : C 08 b 3/22.

#### PROCESS FOR MANUFACTURING CELLULOSE CARBAMATE FIBRES OR FILMS.

Applicant : NESTE OY KEILANIEMI, 02150 ESPOO, FINLAND.

Inventors : 1. JOHAN-FREDRIK SJLIN, 2. JOUKO HUTTUNEN, 3. OLLI TURUNEN, 4. JAN FORS, 5. VIDAR EKLUND, 6. KURT EKMAN.

Application No. 742/Cal/84 filed October 23, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 2 Claims

A process for producing cellulose carbamate fibres or films, wherein cellulose and urea are reacted with each other at elevated temperature for manufacturing cellulose carbamate, the cellulose carbamate is dissolved in an alkaline solution to produce a spinning solution, and the spinning solution is spun with the aid of spinnerets in an acid precipitation solution in order to form fibres or films, characterized in that prior to dissolving, the cellulose carbamate is subjected to a 0.05—10 Mrad radiation dose by utilizing known radiation means whereafter the carbamate is dissolved in alkali and, optionally, the located product is subjected to a mild irradiation dose of 0.05—05 Mrad.

Compl. Specn. 11 pages.

Drg. Nil.

CLASS : 112-F.

161837

Int. Cl. : F 21 m 1/00.

## LIGHT BEAM FOCUSING ELLIPSOIDAL REFLECTOR OF ELECTRIC BULB.

Applicant : THE SECRETARY, RAMAKRISHNA MISSION VIDYAPITH, PURULIA P.O. VIVEKANANDA, NAGAR, DT. PURULIA, WEST BENGAL.

Inventor : I. SWAMI SRADDHANANDA PURI.

Application No. 763/Cal/84 filed October 30, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 4 Claims

A light-beam-focussing ellipsoidal reflector of electric bulb for condensing itself the beam of light, emitted by the bulb inside it, only by reflection in a very small area, normal to and symmetrical about its axis and just in front of its mouth, to illuminate the area as best as practicable without losing considerable light by scattering and absorption as in conventional light-condensing devices with spherical or paraboloidal reflector and condensing lenses : the reflector-assembly comprises an ellipsoidal bulb-casing with white and highly polished inner surface and provided with axial hole on the bulged out back end for fitting bulb-holder to hold ordinary bulb in one arrangement and with normal hole on the bottom side just below the focus to introduce projecting-bulb in it in another arrangement, always with filament normal to and symmetrical about its axis in its focal plane; an ellipsoidal cap, with white and highly polished inner surface and provided with a round hole (mouth), normal to and symmetrical about its axis on frustum (truncated cone) formed at apex just behind its focus, to fit co-axially on the bulb-casing by thread-fitting or push-fitting to form a practically correct ellipsoidal body with conjugate foci, the arrangement being such that the beam of light diverging from the bulb-filament, placed normally with an symmetrical about the axis at the rear focal plane of the reflector-assembly, is almost whole condensed in a very small area normal to and symmetrical about its axis at its front focal plane just in front of its mouth.

Compl. Specn. 5 pages.

Drg. 1 sheet.

CLASS : 146-C.

161838

Int. Cl. G 07 g 1/04

## FULL FIELD MICR ENCODER.

Applicant : MAVERICK MICROSYSTEMS INTERNATIONAL, INC., OF 13242 NORTHEAST 16TH STREET, BELLEVUE, WASHINGTON, UNITED STATES OF AMERICA 98005.

Inventor : I. KEN L. BIVIN.

Application No. 779/Cal/84 filed November 12, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 19 Claims

An apparatus for receiving, transporting and encoding checks, useful in a check encoder, comprising :

- a trough-like receiving element for checks which are to be encoded, wherein the receiving element is arranged so that the checks may be inserted directly downwardly into the receiving element by the operator;
- a check positioning assembly, which includes sensors, for automatically positioning the check to be encoded in a preselected position in the receiving element, prior to the start of encoding of the check;
- a check encoder located with the receiving element and the check positioning assembly; and
- a check moving assembly for moving the check successive selected amounts as the check encoder encodes successive character is thereon.

Compl. Specn. 20 pages.

Drgs. 5 sheets.

CLASS : 131-A.

161839

Int. Cl. : E 21 d 11/00, 15/00, 17/00.

## MOVEABLE SUPPORTING FRAME FOR SUPPORTING THE ROOF IN UNDERGROUND CAVITIES.

Applicant : VOEST-ALPINE AKTIENGESellschaft, OF A-040 LINZ, MULDENSTRASSE 5, AUSTRIA.

Inventors : 1. ALFRED ZITZ, 2. KARL LERCHBAUM, 3. WERNER TOFERER, 4. HEINRICH SUSSENBECK.

Application No. 818/Cal/84 filed November 28, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 8 Claims

Movable supporting frame for supporting the roof in underground cavities, in particular for securing the excavating edge when recovering the pillars in coal mining, comprising a cap supported against a base frame by means of hydraulically extendable props and a lemniscate drive means, the props being pivotally connected with the base frame and with the cap, characterized in that the props (3) assume essentially perpendicular position to stratification and are linked to the base frame (1) and to the cap (5) in a universally pivotable manner thereby preferably providing four props arranged—as seen in a plan view—at the corners of a rectangle, in that the lemniscate drive means (4) is connected with the base frame (1) for swivelling movement in transverse direction relative to the plane defined by the lemniscate guides (8, 9) and is adjustable supported against a swivelling movement and is connected with the cap (5) for universal swivelling movement, in that the cap (5) can be lowered into a transport position (5') located below the lowest operating position and in that one lemniscate guide (8) is pivotally linked to a length-adjustable directing strut (12) having its other end pivotally linked to a linking point (13) connected with the base frame (1), the length (b) of said directing strut being maintained unchanged within the operating area (a) of the supporting frame and being increased in transport position (5').

Compl. Specn. 17 pages.

Drgs. 5 sheets.

CLASS : 50-E.

161840

Int. Cl. : F 25 b 49/00.

## A CONTROL SYSTEM FOR AN ELECTRONIC EXPANSION VALVE IN A REFRIGERATION SYSTEM.

Applicant : CARRIER CORPORATION, AT 6304 CARRIER PARKWAY, P.O. BOX 4800, SYRACUSE, NEW YORK 13221, UNITED STATES OF AMERICA.

Inventors : 1. JOHN WOOSLEY SCHIEDEL, 2. RICHARD G. LORD.

Application No. 843/Cal/84 filed December 5, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

### 5 Claims

A control system for a vapor compression refrigeration system including a compressor, a condenser and an evaporator, said control system comprising :

an expansion valve connected between the condenser and the evaporator to control refrigerant flow between the condenser and the evaporator depending on operating position of said expansion valve;

digitally controllable electric motor means connected to the expansion valve for incrementally adjusting the operating position of the expansion valve in response to electronic digital control signals;

a control means for processing electrical input signals according to preprogrammed procedures and for generating electronic digital control signals in response to the processed electrical input signal;

conductor means for supplying the generated electronic digital control signals from the control means to the digitally controllable electric motor means; and

sensor means, electrically connected to the control means, for sensing at least one operating condition of the refrigeration system and for supplying an electrical input signal to the control means which is a function of the sensed operating condition.

Compl. Specn. 20 pages.

Drgs. 3 sheets.

CLASS : 25A.

161841

Int. Cl. : E04c 1/42.

"A PROCESS FOR THE MANUFACTURE OF GLASS TILES".

Applicant & Inventor : RAVI RAI GUPTA, an Indian national trading as R & M company of 4635, Ajmeri Gate, Delhi-110 006, INDIA.

Application for Patent No. 192/Del/84 filed on 1st March, 1984.

Complete specification left on 31st May, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110 005.

### 3 Claims

A process for the manufacture of glass tiles from crushed or ground glass comprising the steps of preparing a mix, subjecting the mix to form shaped composites, firing the composites to temperature of 730°C to 1150°C for providing tiles and causing simultaneously polishing of the tiles characterized in that said mix containing ground quartz.

Provisional Specn. 5 pages.

Compl. Specn. 6 pages.

CLASS : 42A<sub>2</sub> & 145C.

161842

Int. Cl. : D21h 5/16 & A24d 3/00.

"A CIGARETTE AND METHOD FOR THE MANUFACTURE OF THE SAME".

Applicant : CHARLES CALVIN COHN, a U. S. citizen, of 123 S. New Hampshire Avenue, Atlantic City, New Jersey 08401, U. S. A.

Inventor : CHARLES CALVIN COHN.

Application for Patent No. 459/Del/84 filed on 4th June, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110 005.

### 12 Claims

A cigarette comprising a charge of tobacco in a wrapper of cigarette paper having a Greiner porosity of about 50 or more seconds and a weight between 10 and 35 grams per square meter, said paper being substantially free of burn accelerator other than filler and having a filler content in the range of 15 to 22 percent, at least a part of said cigarette paper being coated with water or ethyl alcohol and having deposited thereon, a linear burn rate reducing substance of the kind such as herein described.

Compl. Specn. 44 pages.

CLASS : 189.

161843

Int. Cl. : A61k 7/16.

Title : STABLE ANTIPLAQUE DENTIFRICE WITH IMPROVED FOAMING AND FLUORIDE STABILITY.

Applicant : COLGATE-PALMOLIVE COMPANY, a corporation organised under the laws of the state of Delaware, of 300 Park Avenue, New York, New York 10022, United States of America.

Inventors : JOHN PIERRE CURTIS, RICHARD JOSEPH CRAWFORD & KATHLEEN MARY YUHAZ.

Application for Patent No. 520/Del/84 filed on 27th June, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110 005.

### Claims 16

A stable antiplaque dentifrice with improved foaming and fluoride stability, comprising as the essential ingredients an effective amount within the range of 0.01—8% of an antiplaque quaternary ammonium compound, at least 1.5% and up to 20% betaine surfactant, 20 to 30% a humectant selected from the group consisting of polyethylene glycol, sorbitol and mixtures thereof, 0.5 to 2% a nonionic gelling agent of the kind such as herein described and preferably a fluoride-providing compound in an aqueous vehicle containing 40—60% of a dental abrasive.

Compl. Specn. 38 pages.

CLASS : 32E.

161844

Int. Cl. : C08f 11/02, 15/16.

"A PROCESS FOR THE PREPARATION OF POLYMERS AND COPOLYMERS USEFUL AS ADDITIVES FOR LIQUID HYDROCARBONS".

Applicant : EXXON RESEARCH AND ENGINEERING COMPANY, of PO Box 390, Florham Park, New Jersey 07932, United States of America a corporation organised and existing under the laws of the State of Delaware, U. S. A.

Inventors : RAMAH JESSICA BROD, JEAN PAUL PHILIPPE COQUEREL & ROBERT LeROY ELLIOTT.

Application for Patent No. 681/Del/84 filed on 28th August, 1984.

Convention date 6th September, 1983/8323897/(U.K.).

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110 005.

## 7 Claims

A process for the preparation of polymers and copolymers useful as additives for liquid hydrocarbons such as fuels and lubricating oils which comprises free radical solvent polymerising one or more unsaturated ester of the kind such as herein described under a blanket of an inert gas at a pressure in the range of 5 p.s.i. to 1600 p.s.i. and at a temperature in the range of from 85°C to 200°C in the presence of a conventional free radical generating catalyst having a half life no greater than 2 hours at the reaction temperature.

Compl. Specn. 20 pages.

CLASS : 129 G & 173 A.

161845

Int. Cl. : B22d 41/00.

Title : A CLOSED SYSTEM ARC SPRAY HEAD.

Applicant : METALLIZING EQUIPMENT CO. (PTY.) LTD., of 5th Chopasni Road, Jodhpur-324 003, Rajasthan, India, an Indian Company.

Inventors : SURESH CHANDRA MODI.

Application for Patent No. 689/Del/84 filed on 3rd September, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110 005.

## 3 Claims

A closed system arc spray head for an electric arcjet metal spraying unit having a pair of guide tubes for the passage of metal wires through them, means for connecting power-lines to the said wire guide tubes, characterised in that there is provided at the end of the said guide tubes an air chamber in the form of a closed head body having an inlet end for air and an outlet orifice for blowing the air out and within the said closed head body the said guide tubes are fixed at an inclination to the central axis of the spray head the inclination being such that their axes if stretched would meet beyond the orifice of the said air chamber forming an acute angle between them.

Compl. Specn. 8 pages.

Drgs 5 sheets.

CLASS : 32 A.

161846

Int. Cl. : CO9b 19/00.

PROCFSS FOR PREPARING NOVEL TRIPHENDI-OXAZINE DYE-STUFF.

Applicant : BAYER AKTIENGESELLSCHAFT, a body corporate organised under the laws of the Federal Republic of Germany of Leverkusen, Bayerwerk, Federal Republic of Germany, Manufacturers.

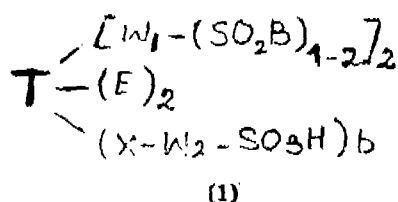
Inventor HORST JAGER.

Application for Patent No. 707/Del/84 filed on 10th September, 1984.

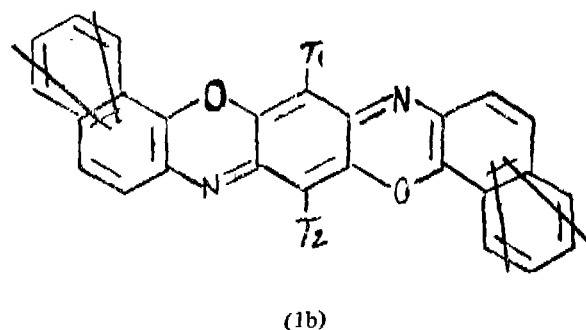
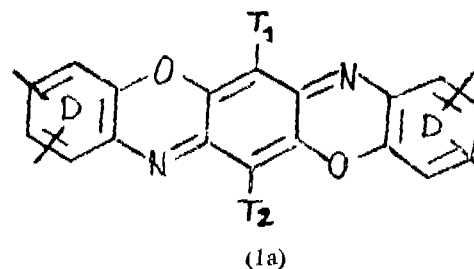
Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110 005.

## 5 Claims

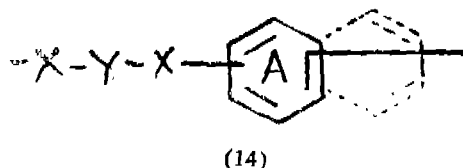
A process for preparing novel triphendioxazine dyestuff of formula 1



of the drawings wherein T is as shown in formula 1a or 1b



of the drawings Where  $T_1$  and  $T_2$  are each H, Cl, Br, F,  $C_1-C_4$ -alkoxy,  $C_1-C_4$ -alkyl, optionally substituted phenyl or phenoxy, preferably Cl, and wherein the benzene rings D and the naphthalene rings can be further substituted by radicals such as herein described and wherein B is  $-CH=CH_2$ ,  $-OH$  or  $-CH_2CH_2Z$  wherein Z is a detachable group W is direct bond or a bridge member which is free-of heterocyclic groups and is bonded to an aromatically carbocyclic C atom in T,  $SO_2B$  being bonded to a C atom in  $W_1$  is a direct bond, to an aromatically carbocyclic C atom in T, X is O, NR or S where R is H or optionally substituted  $C-C_4$ -alkyl,  $W_2$  is an aliphatic, alicyclic or aromatically carbocyclic bridge member, a is 0 to 2, b is 0 to 2, a + b being 0 or 2, wherein if a + b = 0  $W_1$  has at least one anionic group conferring water-solubility, in particular a sulpho group or 2  $SO_3-B$  groups are bonded to  $W_1$ , E is  $SO_3H$ ,  $COOH$  or an optionally substituted sulphonamide group, and wherein, if E is  $SO_3H$  and a is 2,  $W_1$  represents  $W_1$ ,  $W_3$  being shown in formula 14



of the drawings wherein X is as defined above. Y is a direct-bond or  $C_1-C_6$  alkylene which is optionally substituted and/or optionally interrupted by hetero atoms,  $X_1$  is a direct bond, O or NR, preferably NH, and the benzene or naphthalene nucleus A can be substituted or  $-X-Y-$  wherein  $Y_1$  is  $C_2-C_6$ -alkylene which is optionally interrupted by hetero atoms characterised in that diarylide of formula 1 of the drawings (wherein the adjacent rings of the benzene rings and the naphthalene rings are open) are treated with oleum having a 10-50% at temperatures of -0 to 80°C whereby eliminating a-hydrogen molecule and causing the ring closure to produce triphendioxazine dyestuff of formula 1 of the drawings.

Compl. Specn. 18 pages.

Drgs. 26 sheets.

CLASS : 71 F

161847

Int. Cl. : F21b 7/00.

LIGHTENING DEVICE FOR AN UNDERSEA PRODUCTION RISER.

Applicant : SOCIETE NATIONALE ELF AQUITAINE (PRODUCTION), a French Company, of Tour Aquitaine, 92080 Paris la Defense, France.

Inventor : JEAN CLAUDE SCHAWANN, JEAN PAUL CAUMONT & JEAN FALCIMAIGNE.

Application for Patent No. 712/Del/84 filed on 11th September, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110 005.

#### 11 Claims

A lightening device for at least one portion of an under-sea production riser having a central tube surrounded by peripheral stringers, comprising a plurality of separable removable collars made from a material having positive buoyancy and stacked in an axial arrangement between two endmost plates, each collar having central channel for passing the central tube therethrough and rectilinear channels disposed concentrically in a ring about said central channel, each collar including a reinforcing lining for said central channel, said lining projecting from one end of said collar and adapted to receive in the end of a channel in the adjacent collar.

Compl. Specn. 8 pages.

Drg. 1 sheet.

CLASS : 71 F.

161848

Int. Cl. : E21b 7/00.

A GUIDE TABLE FOR A MARINE PRODUCTION RISER.

Applicant : SOCIETE NATIONALE ELF AQUITAINE (PRODUCTION), a French Company, of Tour Aquitaine, 92080 Paris la Defense, France.

Inventors : JEAN CLAUDE SCHAWANN, JEAN PAUL CAUMONT & JEAN FALCIMAIGNE.

Application for Patent No. 713/Del/84 filed on 11th September, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110 005.

#### 6 Claims

A guide table for a marine production riser fixed to the upper part of the central tube of a production riser supported by a surface structure of the semi submersible platform type, for maintaining the centre of the ball joint fixed to the production riser substantially in the vertical access of the opening of the surface structure, circular table comprising an opening for the central tube, said tube having a hinge joint or ball joint allowing angular movement of the tube in any direction with respect to the table and at least two radial arms offset from each other by an angle less than 180°, fixed to the table and whose ends each support a device sliding along vertical rails secured to the platform.

Compl. Specn. 7 pages.

Drgs 2 sheets.

CLASS : 71 F & 150 C.

161849

Int. Cl. : E21b 19/16.

A DEVICE FOR CONNECTING AND DISCONNECTING A TUBULAR PIPE MOVABLE INSIDE A FIXED TUBULAR PIPE BY MEANS OF MOBILE DETENT.

Applicant : SOCIETE NATIONALE ELF AQUITAINE (PRODUCTION), a French Company, of Tour Aquitaine, 92080 Paris la Defense, France.

Inventors : JEAN CLAUDE SCHAWANN, JEAN PAUL CAUMONT & JEAN FALCIMAIGNE.

Application for Patent No. 714/Del/84 filed on 11th September 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-110 005.

#### 6 Claims

A device for disconnecting coupling a first tubular conduit inside a second fixed tubular conduit comprising a longitudinally sliding mobile piece which, for locking, bears on an inclined surface of a mobile detent to swing through an opening formed in the wall of the fixed conduit into a groove formed in said first conduit, comprising also means for driving the sliding piece which means comprise a finger projecting through an aperture formed in the wall of said fixed conduit and sliding in a housing formed in the thickness of this conduit, so that under the effect of the thrust exerted by the downward movement of said first conduit onto said finger by means of a shoulder, the first conduit is locked in position, unlocking being achieved by sliding in the reverse direction under the effect of hydraulic or mechanical means such as a rod.

Compl. Specn. 10 pages.

Drgs. 3 sheets

CLASS : 163 B.

161850

Int. Cl. : F04b 29/00, 45/00.

PUMP FOR VISCOUS FLUIDS.

Applicant : FARREI CORPORATION, A DELAWARE CORPORATION HAVING ITS PRINCIPAL OFFICE AT 25 MAIN STREET, ANSONIA, CONNECTICUT 06401, U.S.A.

Inventor : SIEGEL ARTHUR DWIGHT.

Application for Patent No. 723/Del/84 filed on 14th Sept., 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-5.

#### 9 claims

A pump for viscous fluid comprising a body having a central cylindrical bearing, characterized in that said body has at least one concentric annular channel in it which opens only at the said bearing, a shaft rotatable in said bearing closing the channel and having at least one radial blade complementary to the cross section of the channel and rotatably received in the channel, a first groove in the shaft extending axially from an inlet through the bearing to an area behind the blade considered in the direction of rotation of the shaft and blades a second groove in the shaft extending through the bearing from in front of the blade axially toward an outlet, the fluid entering behind the blade through the first groove progressively filling the channel as the shaft and blade rotate and the advancing blade engaging and forcing the fluid in the channel through the second groove toward the outlet.

Compl. Specn. 14 pages, Drgs. 7 sheets.

CLASS : 154-F & G.

161851

Int. Cl. D 06 p 3/00.

TRANSFER PRINTING SHEET METHOD OF PREPARING TRANSFER PRINTING SHEET AND TRANSFER PRINTING OF TEXTILE MATERIALS.

Applicant : SICPA HOLDING SA., OF HAUPTSTRASSE 9, 8750 GLARUS, SWITZERLAND.

Inventors : 1. DR. WOLFGANG MEHI 2 ALBERT AMON.

Application No. 846/Cal/84 filed December 6, 1984

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.



## 20 claims

Transfer printing support in sheet or web form for the thermoprinting of hydroxyl group or nitrogen containing textile fiber materials, characterized by the fact that it comprises, as a coating on a flat substrate :

one or more impregnating agents selected from non-toxic organic substances containing at least one nitrogen atom in their molecules, which are solid upto 60°C and have a melting temperature in the range of from 60° to 230°C, which are liquid up to at least 230°C and substantially colourless, and which are not a film-forming polymer and should not attract the fibres and damage them

at least one dyestuff in the form of a pattern to be transferred; and

a binder,

said dyestuff being selected from dyestuffs which are not substantially water soluble at least in the neutral region, which do not noticeably sublimate under the conditions of the sublimation transfer printing, and which are capable of thermosoling, said dyestuff and impregnating agent being selected such that the impregnating agent has solvent properties for the dyestuff in its liquid state but not in its solid state in which the dyestuff or combination of the dyestuff with other ingredients reflect a printing pattern.

Compl. Specn. 45 pages, Drg. nil.

CLASS : 84-C., 161852

Int. C 10 I 5/02.

#### AN IMPROVED IGNITABLE COMPOSITION OF MATTER AND PROCESS FOR PREPARING THE SAME.

Applicant & Inventor : SANTANU ROY, OF 13, NANDA KUMAR CHOWDHURY LANE, CALCUTTA-700006, INDIA.

Application No. 857/Cal/84 filed Decemehr 10, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 29 claims

An ignitable composition which comprises cellulosic matters in a state of subdivision preferably around 200 mesh and substantially depleted of moisture content preferably around 1% by weight, admixed with at least 1% by weight of an organo hydroxy compound such as herein described and with at least 1% by weight of liquid fuel(s) and/or microbial fluid fuel(s), and, if desired, formed into suitable configuration.

Compl. Specn. 22 pages, Drg. 1 sheet.

CLASS : 206-E. 161853

Int. Cl. H 03 f 21/00.

#### BRIDGE-TYPE OVERLOAD-PROTECTED AMPLIFIER.

Applicant & Inventor : VALERY MIKHAILOVICH NAZAROV, OF FLOTSKAYA ULITS 7, KORPUS 3, KV. 413, MOSCOW, USSR.

Application No. 106/Cal/85 filed February 12, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 2 claims

An overload-protected bridge-type amplifier comprising the push-pull amplifier stages each one being composed of at least two amplifying elements having different types of conduction, whose inputs are joined together via gating elements and connected to a bias current source, a first amplifying element having one type of conduction of each said stage being provided with a current transducer and a voltage transducer connected to the control input of a protection regulating member, whose first lead-out is coupled with the input of the first

amplifying element of the same push-pull stage, characterized in that each second lead-out of the regulating member of one push-pull amplifier stage is connected with the input of the second amplifying element of the other push-pull stage.

Compl. Specn. 12 pages, Drgs 2 sheets.

CLASS : 56-B & G.

161854

Int. Cl. C 10 b 47/00.

#### PROCESS FOR IMPROVING PRODUCT YIELDS FROM DELAYED COKING.

Applicant : CONOCO INC. OF P.O. BOX 1267, PONCA CITY, OK 74601, UNITED STATES OF AMERICA.

Inventors : 1. HARLAN GENE GRAF, 2. HARRY RICHARD JANSSEN.

Application No. 109/Cal/85 filed February 13, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 10 claims

An improved process for producing delayed coke by delayed coking of a heavy hydrocarbon oil feedstock in a coking unit comprising a coker furnace, a coking drum and a coker fractionator to produce delayed coke and cracker liquid and gaseous hydrocarbon products comprising the step of :

- delayed coking said heavy hydrocarbon oil in said coking drum to produce delayed coke having a volatile matter content of not more than 15 percent by weight;
- recovering overhead vapors from said coking drum and fractionating them in said coker fractionator;
- recovering the highest oiling fraction of said overhead vapors and removing said fraction from said process; and
- adding a diluent hydrocarbon, having a lower boiling range than said highest boiling fraction, to said heavy hydrocarbon oil feedstock to prior to heating said heavy hydrocarbon oil feedstock to coking temperature in said coker furnace so as to effectively prevent coke deposition in said coker furnace, whereby the yield of delayed coke having a volatile matter content of less than 15 percent by weight is lower, and the liquids yield is higher, than the yields which would be obtained if said highest boiling fraction of said overhead vapors were combined with said feedstock.

Compl. Specn. 15 pages, Drgs. 2 sheets.

CLASS : 40-F; 132-B.

161855

Int. Cl. B 01 j 1/00; B 01 f 5/00.

#### FLOW MIXER.

Applicants : (1) ZAKLADY PRODUKCJI URZADZEN MECHANICZNYCH IM. JANKA KRASICKIEGO, FLWO, OF UL. BIELSKA 44, PSZCZYNA, POLAND (2) BIURO STUDIOW I PROJEKTOW ENERGETYCZNYCH ENERGOPROJEKT, OF UL. JESIONOWA 15, KATOWICE, POLAND.

Inventors : 1. ANTONI SATERNUS, 2. LUDWIK MICZFK, 3. MIECZYSLAW BARTNIK.

Application No. 146/Cal/85 filed February 28, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 5 claims

A continuous mixer for mixing fine-grained and dusty materials with water in a continuous manner comprising a batch feeder, a moistening chamber with a slow-speed mixer, a cylinder chamber with an in-built shaft connected to homogenizing-pushing-through members in the form of separately mounted worm segments, a fluidization chamber having a shape of a cone frustum or a series of interconnected cylinders of increasing diameters in the horizontal direction of the shaft, and on the shaft built-in mixing-pushing-through members in the form of bars, blades or leaves whose length changes inversely with the internal diameter of the chamber, whereas the cover wall of the fluidization chamber has in the upper fragment an outlet-pipe connected to an outflow control element moistening chamber, the fluidization chamber water-supply stub-pipes inspection manhole, a built-in sample-collection stub-pipe an inlet stub-pipe of the fluidization chamber and other granular bodies built-in from inside stoppers in the radial direction.

Compl. Specn. 9 pages. Drg. 1 sheet.

CLASS : 85-G & J.

161856

Int. Cl. B 22 f 3/14; F 27 b 21/00.

## HIGH-PRESSURE SINTERING FURNACE.

Applicant : DEGUSSA AKTIENGESSELLSCHAFT, OF 6000 FRANKFURT AM MAIN, WEISSFRAUENSTRASSE 9, FEDERAL REPUBLIC OF GERMANY.

Inventor : 1. ROLF SCHUSTER.

Application No. 147/Cal/85 filed February 28, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 2 claims

High-pressure sintering furnace for sintering and pressure-condensation of pressed objects made of metal and/or non-metal powders consisting of a pressure casing and a thermal insulation, within which is situated a graphite pipe enclosed by heating conductors for receiving the pressed objects, characterized in that the graphite pipe (4) consists of carbon-fibers reinforced graphite, the heating conductors (5) are likewise made of carbon-fibers reinforced graphite and enclose the graphite pipe (4) in ring-shaped manner without support.

Compl. Specn. 5 pages. Drg. 1 sheet.

CLASS 98-H.

161857

Int. Cl. G 05 d 23/00.

## A SYSTEM FOR MAXIMIZING THE MAIN STEAM TEMPERATURE IN POWER GENERATION BOILER/TURBINE INSTALLATION.

Applicant : THE BAPCOCK & WILCOX COMPANY, OF 1010 COMMON STREET P.O. BOX 60035 NEW ORLEANS, LOUISIANA 70160, UNITED STATES OF AMERICA.

Inventors : 1. MARION ALVAH KEYES IV. 2. MICHAEL PAUL LUKAS & 3. WILLIAM HARRIS MOSS.

Application No. 177/Cal/85 filed March 11, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 7 claims

A system for maximizing the main steam temperature in a power generation boiler/turbine installation comprising means producing an output signal representative of the temperature of the steam entering the turbine, means for comparing said output signal representative of said turbine steam temperature with a predetermined system parameter, said comparing means producing an output signal representative of the difference between said turbine steam temperature and said predetermined system parameter, and means responsible to said difference output signal producing a trim signal to vary the set point of said turbine steam temperature.

Compl. Specn. 14 pages. Drgs. 3 sheets.

CLASS : 34-D.

161858

Int. Cl. C 08 b 3/00.

## PROCESS FOR MANUFACTURING CELLULOSE CARBAMATE.

Applicant : NESTE OY KEILANIEMI 02150 ESPOO FINLAND.

Inventors : 1. KURT EKMAN, 2. OLLI TURNEN, 3. JOUKO JUUTUNEN, 4. JOHAN-FREDERIK SELIN & 5. JAN FORS.

Application No. 178/Cal/85 filed March 11, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 6 claims

A process for manufacturing cellulose carbamate by reacting isocyanic acid and cellulose at elevated temperature characterised by admixing/impregnating biuret optionally together with urea with/into cellulose and heating the mixture at a temperature above 170°C for a time sufficient to produce isocyanic acid required for the reaction with cellulose to produce cellulose carbamate.

Compl. Specn. 9 pages. Drg. nil.

CLASS 167-F.

161859

Int. Cl. D 07 b 1/18.

## DRUM SCREENING MACHINE.

Applicant : HEIN TEHMANN AG OF FICHTENSTR. 75 D-1000 DUISBURG 1, WEST GERMANY.

Inventor : 1. KURT HOPPE

Application No. 181/Cal/85 filed March 11, 1985

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 8 claims

Screening machine with a screening drum which rotates about its axis and has a screen made of elastic material, characterised in that the screening drum (1) has at least one circumferential zone (14) which has the shape of a cylinder or truncated cone and the length of which in order to alternately stretch and relax the screen lining (20) is adapted to change in a flexing manner in the axial or conveying direction, and elastic annular fixing areas (11a-13a) for the screen lining are provided between two screening zones (14), and fixing means are fixed alternately to first parts (2) of the screening drum (1), which first parts only rotate, and to second parts (3) of the screening drum, which second parts (3) rotate and at the same time vibrate in the axial direction.

Compl. Specn. 10 pages. Drgs. 2 sheets.

CLASS : 19-C.

161860

Int. Cl. F 16 b 35/00.

## A FASTENER APPARATUS.

Applicant & Inventor : ROLF HENNING WILHELM STEINBOCK 603 LINDSAY ROAD, CARNEGIE, PENNSYLVANIA 15106, UNITED STATES OF AMERICA.

Application No. 182/Cal/85 filed March 12, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 13 claims

A fastener apparatus to compress a support member against a first member, said apparatus including an elongated shank part extending from said first member and passed freely through an enlarged opening in said support member, an anchor flange connected to one end portion of said elongated shank part for support by said first member, a stress generating flange connected to an opposite end portion of said elongated shank part for exerting a compressive force on said

support member, said stress generating flange having a plurality of holes at spaced-apart locations about an outer peripheral part thereof to overlie said support member, and plurality of jack bolts threadedly engaged with said holes to separately receive a torque, the jack bolts having end parts extending from said holes to stress said elongated shank part extending between said anchor flange and said stress for applying a compressive reaction force between said support member and said first member.

Compl. Specn. 26 pages. Drg. 6 sheets.

CLASS : 69-E.

161861

Int. Cl. H 01 h 1/00.

#### ROTARY SNAP-ACTION ELECTRICAL SWITCHES.

Applicant : WESTINGHOUSE ELECTRIC CORPORATION, OF WESTINGHOUSE BUILDING, GATEWAY CENTER, PITTSBURGH, PENNSYLVANIA 15222, UNITED STATES OF AMERICA.

Inventor : I. GREGORY JAMES GOLUB.

Application No. 246/Cal/85 filed April 2, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

18 claims

A rotary, snap-action electrical switch, for immersion in liquid dielectric of an electrical transformer, said switch comprising a frame, rotor means, said frame including stop members, one for each position of the switch, and stationary electrical contacts, said rotor means being mounted for rotation on a longitudinal center line within said frame, said rotor means including a switch rotor and an operating mechanism, said switch rotor including electrical contacts at predetermined switch positions, characterized in that said operating mechanism including first and second nested portions each independently rotatable about said center line spring means which relate the first and second nested portions to one another, and means linking the first nested portion with said switch rotor, said first nested portion including latch means for latching the first nested portion at a stop member, said latch means comprising first and second latch members, with one latch member stopping the first nested portion at a stop member and the other preventing rebound, said second nested portion including an actuating shaft for loading the spring means against the resistance of the latched first nested portion, said second nested portion further including latch release means which releases the latch means from a stop member during the loading of the spring means, with the loaded spring means curling the unlatched first nested portion to advance to an adjacent stop member with a snap action, while simultaneously advancing the switch rotor to an adjacent switch position.

Compl. Specn. 25 pages. Drgs. 9 sheets.

CLASS : 50-D, F.

161862

Int. Cl. : F 25 b 49/00.

#### APPARATUS FOR OPERATING REFRIGERATION SPSTEMS.

Applicant : CARRIER CORPORATION, AT 6304 CARRIER PARKWAY, P.O. BOX 4800, SYRACUSE, NEW YORK 13221, UNITED STATES OF AMERICA.

Inventor : I. RICHARD GARY LORD

Application No. 255/Cal/85 filed April 2, 1985

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

2 Claims

An apparatus for operating a refrigeration system including a compressor for compressing gaseous refrigerant supplied to the compressor from an evaporator, comprising :

valve means for closing off refrigerant flow to the evaporator whenever the refrigeration system is shut

down; and

control means for generating and supplying a first control signal to the refrigeration system compressor to run the compressor for a first preselected amount of time to reduce the refrigerant pressure in the evaporator to a first desired level when the valve means closes off refrigerant flow to the evaporator after the refrigeration system is shut down, and for generating and supplying a second control signal to the refrigeration system compressor to run the compressor for a second preselected amount of time to reduce the refrigerant pressure in the evaporator to refrigeration system after a shut down.

Compl. Specn. 14 pages.

Drg. 1 sheet.

CLASS : 116-C, G.

161863

Int. Cl. : F 16 g 3/00.

Applicant : SATAKE ENGINEERING CO. LTD., OF 19-20, UENO-1-CHOME, TAITO-KU, TOKYO, JAPAN.

Inventor : I. TOSHIHIKO SATAKE.

Application No. 279/Cal 85 filed April 11, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

10 Claims

A belt connector device for connecting opposite end portions of a belt to each other to form an endless belt assembly for use in a belt type delivery apparatus, said belt connector device comprising :

mounting means including a pair of opposed, but spaced side wall members;

first and second rollers rotatably mounted on said side wall members so as to have respective rotary axes extending substantially in parallel to each other and laterally to said side wall members, said first and second rollers having their respective circumferential surfaces co-operating with each other to define therebetween a gap;

drive means for drivingly rotating said first roller to forcibly move, through said gap, the opposite end portions of the belt received in said gap with the opposite end portions of the belt being in contact with each other in face to face relation, while clamping the opposite end portions of the belt between said first and second rollers, until a tension applied to the belt reaches a desired value; and

locking means for locking at least one of said first and second rollers against the rotation thereof to maintain the opposite end portions of the belt clamped between said first and second rollers, to thereby connect the opposite end portions of the belt to each other to form the belt into an endless loop.

Compl. Specn. 20 pages.

Drgs. 2 sheets.

CLASS : 154-A & D.

161864

Int. Cl. : B 41 f 1/00.

#### KANT MATRIX FOR MULTICOLOURED PRINTING.

Applicant & Inventor : CHANDER PARKASH KANT, 4, CHOWRINGHIE SQUARE (STATESMAN HOUSE), CALCUTTA-700 001, INDIA.

Applicant : CHANDER PARKASH KANT, 4, CHOWRINGHIE SQUARE (STATESMAN HOUSE), CALCUTTA-700 001, INDIA.

Application No. 291/Cal 85 filed April 16, 1985.

Complete Specification left on 31st March, 1986.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 11 Claims

Kant system for Multicolour Printing with single impression of graphic design in line art with separate flat colours comprising a Matrix characterised in that the said Matrix consists of a set of two-tier plates the upper plate having an image plate on its surface has non-image areas in relief and the image are as etched, engraved, processed or shaped into it in reverse by photo mechanical or any other known method and has through holes drilled over the entire image area and, the lower plate is either one piece or several moveable pieces grouped together and has on its surface channels so engraved or shaped that one end or any point along its length registers with one or more of the through holes on the upper plate and the other end meets another hole on this plate itself through which liquid ink/lacquer is fed to the image area in such a manner that all colours in the concerned designs are printed/deposited on paper, board or any other suitable material with single impression when this Matrix is used on the patented Machine for Printing by Depositions (Indian Patent No. 149621) or on any other machine for the purpose of printing.

Compl. Specn. 11 pages.

Drgs. 4 sheets.

CLASS : 13-C.

161865

Int. Cl. : B 31 b 1/00.

## SELF-SEALING PAPER SACK.

Applicant : TEA-MA CONSORTIUM INDIA LIMITED, 10, MIDDLETON ROW, CALCUTTA-700 071, WEST BENGAL, INDIA.

Inventor : 1. VIRENDRA KUMAR SARDANA.

Application No. 387/Cal/85 filed May 21, 1985.

Complete Specn. left on 18th April, 1986.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office, Calcutta.

## 4 Claims

A self-sealing paper sack for packaging tea and like granular material, which is formed out of a paper sheet characterised in that it comprises a performed flat tube attached to and enclosed by the sack at particular position the sack having floods at several positions so that when folded the sack gets the form of a pillow case with the flat tube inlet for tea or like granular material into the sack before the flat tube being adapted to roll or slide back into the folio of the paper sack after the material is filled in and get compressed to seal the sack under the weight of the material.

Compl. Specn. 5 pages.

Drg. 1 sheet.

CLASS : 119-E.

161866

Int. Cl. : B 65 h 59/00.

## REELED MATERIAL TENSION CONTROL APPARATUS.

Applicant : VSESOJUZNY NAUCHNO ISSLEDOVATELSKY I KONSTRUKTORSKY INSTITUT PO OBORUDOVANIJU DLYA SHINNOI PROMSHLENNOSTI "NIISHINMASH", OF YAROSLAVL, PROSPEKT LENINA, 44, USSR.

Inventors : 1. EFIM BORISOVICH KIPNIS, 2. TATYANA VLADIMIROVNA VESELOVA, 3. JURY ALEXANDROVICH KHLAPOV, 4. JURY ALEXANDROVICH ROGOZIN.

Application No. 390/Cal/85 filed May 23, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office, Calcutta.

## 6 Claims

Apparatus for controlling tension of the roll material during its reeling, comprising a friction mechanism connected with the shaft of a take-off reel for transmission of braking effort thereto so as to produce a required tension of the material and with a power cylinder adapted to regulate the amount of braking effort produced by the friction mechanism and connected with a device intended to regulate the fluid pressure in the cylinder and coupled through a screw drive to the reel a former co-operating with the pressure regulator so as to regulate pressure in the cylinder depending on the position of the former and rigidly connected with the nut of the screw drive having its screw coupled to the shaft of the take-off reel.

Compl. Specn. 10 pages.

Drgs. 2 sheets.

CLASS : 130-G.

161867

Int. Cl. : C 22 b 21/00, B 22 d 41/00.

## LADLE FOR THE CHLORINATION OF ALUMINIUM ALLOYS FOR REMOVING MAGNESIUM.

Applicant : ALUMINIUM PECH INEY, OF 23 RUE BALZAC, 75008 PARIS, FRANCE, A FRENCH COMPANY.

Inventor : 1. EMILE BRIOLLE, 2. JEAN-MARIE HICTER, 3. ADOLFO MATEOS.

Application No. 394/Cal/85 filed May 23, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office, Calcutta.

## 7 Claims

A ladle for the chlorination in a co-flow mode of aluminium alloys in a molten condition, for removing magnesium, comprising an external metal casing (1) an internal refractory lining (2) a metal intake spout (3) and a metal outlet spout (4) an internal vertical partition (6) which with the bottom of the ladle leaves a space (7) for the flow of the metal and which divides the ladle into a feed compartment (8) and a single treatment compartment (9) in which a rotor (10) for radial dispersion of chlorinated gas is disposed characterised in that the treatment compartment is closed at its base by a horizontal wall (13) which extends at the leave of the bottom of the partition and which is apertured at its centre with an opening (14) the axis of which coincides with the axis of rotation of the rotor.

Compl. Specn. 13 pages.

Drg. 1 sheet.

CLASS : 32-E.

161868

Int. Cl. : C 08 f 27/00, 45/00 and 47/00.

## AN IMPROVED PROCESS FOR PRODUCING STYRENE-BASE RESIN.

Applicant : 1. MITSUI TOATSU CHEMICALS, INCORPORATED, OF 2-5, KASUMIGASEKI 3-CHOME, CHIYODA-KU, TOKYO, JAPAN, 2. TOPO ENGINEERING CORPORATION, OF 2-5, KASUMIGASSKI 3-CHOME CHIYODA-KU TOKYO, JAPAN.

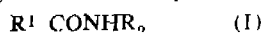
Inventor : 1. TETSUYUKI MATSUBARA, 2. NORIFUMI ITO, 3. KAZUO SUGAZAKI, 4. KOUZO ICHIKAWA, 5. MUNE IWAMOTO, 6. TOSHIHIKO ANDO.

Application No. 397/Cal/85 filed May 24, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972) Patent Office, Calcutta.

## 4 Claims

An improved process for producing a styrene-base resin of excellent moldability and a good hue by continuous blk polymerization or solution polymerization, the improvement wherein in the course of the process, one or more higher fatty acid amides represented by the following formula (I) :



wherein  $R^1$  is an alkyl group having 8—22 carbon atoms,  $R_2$  means a hydrogen atom, hydroxymethyl group or  $(\text{CH}_2)_n \text{NHCOR}^*$  ( $R^*$  is an alkyl group having 8—22 carbon atoms and may be same as or different from  $R^1$ ; and  $n$  is 1 or 2), when desired in combination with known metallic soaps are continuously added in dissolved or molten state to a continuous flow of the styrene-base resin in a molten or dissolved state at a temperature of 60°C.

or higher and in an amount of 1.0—8.0 parts by weight per 100 parts by weight of the resin, so that a styrene-base resins having excellent moldability and a good hue is produced.

Compl. Specn. 39 pages.

Drg. Nil.

CLASS : 63-B.

161869

Int. Cl. : H 01 f 3/00.

## HINGED ARMATURE MOUNTING.

Applicant : BROWN, BOVERI & CIE AG. OF D-6800 MANNHEIM KAFERTAL, KALISTADTER STRASSE 1, FEDERAL REPUBLIC OF GERMANY, A WEST GERMAN COMPANY.

Inventors : 1. KLAUS GREEFE, 2. KRWIN MUDERS, 3. RICHARD KOMMERT, 4. RUDOLF SELLNER.

Application No. 426/Cal/85 filed July 6, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 5 Claims

Hinged armature mounting of a hinged armature magnet, preferably for an electromagnetic trigger device, comprising a rectangularly bent yoke with a coil with an iron core secured on the yoke, limb, a hinged armature disposed so as to move about a yoke knife edge at the end of the other yoke limb, and an anchoring spring which engages on the hinged armature, characterised in that the hinged armature is mounted between the yoke knife edge and a limiting pin which is disposed above the said yoke edge in the centre of the yoke, and that the hinged armature has engaging studs which engage behind the yoke knife edge in order to lock the hinged armature together with the yoke.

Compl. Specn. 10 pages.

Drgs. 2 sheets.

CLASS : 172-D.

161870

Int. Cl. : D 01 h 1/20.

## SPINNING OR TWISTING ELEMENT WITH INDIVIDUAL DRIVE.

Applicant : SKF TEXTILMASCHINEN-KOMPONENTEN GMBH, LOEWENTORSTRASSE 69 D-7000 STUTTGART 50, FEDERAL REPUBLIC OF GERMANY.

Inventor : ERNST BRAUN.

Application No. 460/Cal/85 filed June 21, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 3 Claims

Spinning or twisting element with individual drive by means of an asynchronous motor fed by a converter, the motor rotor being connected to the spinning or twisting ele-

ment shaft, characterized in the stator of the asynchronous motor presents at least 24 grooves and that the thickness of the stator laminate (i) and the rotor laminate (4) is less than 0.3 mm.

Compl. Specn. 6 pages.

Drg. 1 sheet.

CLASS : 40F & 201D.

161871

Int. Cl. : CO2b 1/00 & CO2c 5.00, 1/00.

## "PROCESS AND APPARATUS FOR ANAEROBIC TREATMENT OF ORGANICALLY POLLUTED LIQUIDS".

Applicant : SULZER BROTHERS LIMITED, a Swiss Company, of CH. 8400 Winterhur, Switzerland.

Inventors : KURT TREUTLER & ANTON HASENBOHLER.

Application for Patent No. 775/Del/81 filed on 11th December, 1981.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-100 005.

## 14 Claims

A process for anaerobic treatment of organically polluted liquids, the organic substances being broken down at least to some extent through the agency of anaerobic micro-organisms in a reaction chamber to give a multiphase reaction mixture consisting of at least biologically active sludge and the treated liquid, the same being discharged from the reaction chamber, characterised in that suspended solids entrained by the discharged liquids are retained at the end of the reaction chamber.

Compl. Specn. 18 pages.

Drgs. 4 sheets.

CLASS : 136-E.

161872

Int. Cl. : B 29 j 5/00.

## APPARATUS FOR THE PRESSING OF FIBRE CEMENT SHEETS.

Applicant : BELL MASCHINENFABRIK AKTIENGESELLSCHAFT, OF 6010, KRIENS, SWITZERLAND, A SWISS BODY CORPORATE.

Inventor : OSKAR KUMMER.

Application No. 693/Mas/84 filed September 12, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Madras Branch.

## 12 Claims

Apparatus for the pressing of fibre cement sheets which, initially in the form of a fibre cement mat, lie centrally on a press plate having symmetrically arranged, lateral manipulation areas, between which the sheets lie, and which are conveyed by a conveying device into a pressing place of a press and subsequently, as pressed sheets on the press plate, out of the pressing place, characterised in that, to receive the press plates with the sheet, the conveying device has two conveyor belts running parallel to each other along the pressing place, the relative spacing and width of which belts correspond to the spacing and width of the manipulation areas of the press plates, which are conveyed resting freely on the belts which, are provided with engagement points successively spaced at regular intervals along their length and in fixed position with respect to the belt, which belts have an associated drive device, which has engagement elements designed to correspond to the engagement points and engaging the engagement points, the drive device being designed for the synchronous movement of the two belts, i.e. at the same speed at the same time.

Compl. Specn. 18 pages.

Drg. 1 sheet.

CLASS : 101 B.

161873

Int. Cl. : E 02 d-21/00, 27/50.

## FLEXIBLE OFFSHORE PLATFORM.

Applicant : ENTREPOSE G.T.M. POUR LES TRAVAUX PETROLIERS MARITIMES E.T.P.M., of Courcellor II, 33—35 rue d'Alsace, 92531 Levallois-Perret; ENTREPRISE E'EQUIPMENTS MECANIKES ET HYDRAULIQUES E.M.H., of 196 Bureaux de la Colline, 92213 Saint-Cloud; and SOCIETE FRANCAISE D'ETUDE D'INSTALLATIONS SIDERURGIIQUES SOFRESID, of 59 rue de la Republique, 93108 Montreuil Cedex; all of France and French nationality.

Inventor : ANDRIER Bernard.

Application No. 694/Mas/84 filed September 12, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office, Madras Branch.

## 4 Claims

A flexible offshore platform comprising a foundation which fixes the platform to the sea bed, a flexible column having sufficient rigidity to develop reaction stresses fixed to the foundation and extending over more than half the total height of the platform, a stabilizer fixed to the top of the column, a deck and a second column connecting the stabilizer to the deck, the stabilizer being positioned to be immersed in the water, characterised in that :

- (a) the stabilizer comprises at least a massive open shell to entrain a mass of water, thereby providing a stabilising effect, and,
- (b) the massive open shell and entrained mass of water increase the period of a longer natural bending mode of the structure to above 25 seconds and maintain the period of a shorter natural bending mode of the structure to below 7 seconds, relative to the respective periods of a similar structure without a stabilizer.

Compl. Specn. 9 pages

Drgs. 2 sheets.

CLASS : 99F &amp; 179 G.

161874

Int. Cl. : B65d 11/00.

## CYLINDRICAL CONTAINER FOR PRESSURISED FLUIDS.

Applicant : THE BRITISH PETROLEUM COMPANY P.L.C., a British Company, of Britannic House, Moor Lane, London EC2Y 9BU, England.

Inventor : WILLS ANTHONY JAMES.

Application for Patent No. 866/Del/84 filed on 15th November, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

## 14 Claims

A cylindrical container for the storage and transportation of pressurised fluids comprising a thermoplastic inner liner which is stable and impervious to the fluid to be contained therein up to a predetermined temperature, a fusible plug portion and an outer layer of an insulating fire resistant material encasing the inner liner characterised in that (a) the inner liner is fluid pervious above said predetermined temperature, (b) the inner liner is integral with the fusible plug portion, and (c) the outer layer of the insulating fire resistant material encases the inner liner in a manner so as to expose the fusible plug portion as herein described.

Compl. Specn. 20 pages.

CLASS : 136 M.

161875

Int. Cl. : B29h 17/02.

## TIRE BUILDING MACHINE.

Applicant : NRM CORPORATION, a corporation of the State of Ohio, of 400 W. Railroad Street, Columbiana, Ohio 44408, United States of America.

Inventor : GEORGE EUGENE ENDERS.

Application for Patent No. 963/Del/84 filed on 27th December, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

## 5 Claims

A tire building machine comprising a tire building drum for receiving at least one ply of tire material overhanging an axial end of said drum, said tire building drum being mounted on a drum shaft, a bladder turn-up mechanism extending axially outwardly from said drum, an annular array of radially contractible ply-down spring fingers moveable axially to and from a position encircling an edge of said overhanging tire material, and an axially movable multi-functional ring for first effecting radial contraction of said ply-down spring fingers to turn the ply edge down over the end of the drum, secondly for setting a tire bead carried thereby against the turned down ply edge at the end of the drum, and thirdly to push the bladder of the turn-up mechanism when inflated to cause said ply edge to be progressively wrapped around the bead and then over said drum, said bladder turn-up mechanism, said annular array of spring fingers and said multi-functional ring all being mounted on an annular support for independent axial movement on said drum shaft.

Compl. Specn. 17 pages.

Drg. 1 sheet.

CLASS : 195 B.

161876

Int. Cl. : B60t 13/24, 15/02.

## "MULTI CIRCUIT FLUID PRESSURE CONTROL VALVE ASSEMBLIES".

Applicant : BENDIX LIMITED, of Douglas Road, Kingswood, Bristol BS15 2NL, England, a British Company.

Inventors : STEPHEN WALTER FOGG & MARTIN JOHN BENNETT.

Application for Patent No. 25/Del/85 filed on 15th January, 1985.

Convention dated 28th January, 1984/8402295/(U.K.).

Appropriate office for opposition proceedings (Rule 4, Patents Rule, 1972) Patent Office Branch, New Delhi-110005.

## 6 Claims

A multi circuit fluid pressure control valve assembly including a housing, first and second self lapping double valves each comprising a valve member resiliently urged towards closing engagement with a fluid pressure inlet valve seat and closingly engageable by a relatively moveable vent valve seat such movement being in a sense to unseat the valve member from the inlet valve seat, said first self-lapping valve being connected for providing communication between a first fluid pressure output port and a first fluid pressure input port or a vent port and said second self lapping double valve being connected for providing communication between a second fluid pressure output port and a second fluid pressure input port or a vent port the respective output ports being connected oppositely to pressureable areas of respective mutually resiliently interacting pressure responsive members so that pressures at the output ports each act in a sense to tend to seat the respective valve member against its inlet valve seat and unseat it from its vent valve seat and wherein said

pressure responsive members carry mutually displaceable parts which define a variable fluid flow restriction in a vent path between at least one said double valve and the respective vent port and which act in a sense more appreciable to impede fluid flow in said vent path when the pressure responsive members are urged towards one another.

Compl. Specn. 11 pages.

Drg. 1 sheet.

CLASS : 32E.

161877

Int. Class : C08f 1/13.

**A PROCESS FOR THE AQUEOUS EMULSION POLYMERISATION OF FUNCTIONALISED MONOMERS**.

Applicant : THE GOODYEAR TIRE & RUBBER COMPANY, A CORPORATION ORGANISED UNDER THE LAWS OF THE STATE OF OHIO, UNITED STATES OF AMERICA, HAVING A PRINCIPAL PLACE OF BUSINESS AT 1144 EAST MARKET STREET, AKRON OHIO 44316-0001, UNITED STATES OF AMERICA.

Inventors : DANNIN BRUCE PATTERSON DANE KENTON PARKER & LLOYD DOUGLAS HESS.

Application for Patent No. 45/Del/85 filed on 23rd January, 1985.

Appropriate office for opposition proceeding (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-5.

9 claims

A process for forming a polymer comprising the aqueous emulsion polymerization of :

- (a) at least one functionalized monomer of the kind such as herein described that contains a polymerizable vinyl group; with
- (b) at least one copolymerizable conjugated diene monomer selected from the group consisting of butadiene-1, 3-2-chloroutadiene-1, 3-isoprene, piperylene and conjugated hexadienes; and optionally
- (c) at least one vinyl monomer selected from the group consisting of styrene, methylstyrene, divinylbenzene, vinyl chloride, vinyl acetate, vinylidene chloride, methylmethacrylate, ethyl acrylate, vinylpyridine, acrylonitrile, methacrylonitrile, methacrylic acid and acrylic acid;

the ratio of functionalized monomer to conjugated diene to vinyl monomer can range from 5 : 75 : 20 to 95:5:0 parts per hundred based on total monomers; in the presence of from 8 to 30 parts of an ionic soap per 100 parts of total organic components, (monomers and cosolvents) and 40-80 parts of dichloromethane, tetrahydrofuran or combinations thereof based on 100 parts of total monomers.

Compl. Specn. 27 pages. Drgs. 5 sheets.

CLASS : 128 K, G.

161878

Int. Class A61b 17/00.

**IMPROVED BLOOD SUCTION APPARATUS.**

Applicant : ANAND MEDICAIDES PRIVATE LIMITED, 4, DLF INDUSTRIAL AREA, NEW DELHI-110015, AN INDIAN COMPANY, INCORPORATED UNDER THE INDIAN COMPANIES ACT, 1956.

Inventor : VIDYA SAGAR ANAND.

Application for Patent No. 344/Del/85 filed on 23rd November, 1985.

Appropriate office for opposition proceeding (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-5.

5 claims

An improved blood suction apparatus consisting of a blood collecting bottle which has two metallic tubes fitted in its mouth, of which one tube is connected to a tubing to such into the bottle the blood released during the performance of surgical operation, and of which the second tube is adapted to act as a overflow tube and is connected through a tube to a third metallic tube fitted in the mouth of a second bottle a fourth metallic tube is fitted in the mouth of the second bottle and reaching almost to the bottom of the second bottle, the outer end of the fourth metallic tube being connected through a chamber to a P.C. Board housing the electronic circuit which is adapted to operate an electric motor which operates a vacuum pump which is connected to the said chamber to create necessary vacuum in the apparatus for sucking in blood into the blood collecting bottle.

Compl. Specn. 8 pages. Drg. sheet 1.

CLASS : 6A<sub>2</sub> & 80B

161879

Int. Class : B01d 29/00.

**FLUID FILTER WITH BIDIRECTIONAL BYPASS**.

Applicant : BENDIX LIMITED, A BRITISH COMPANY, OF DOUGLAS ROAD, KINGSWOOD, BRISTOL BS15 2NL, ENGLAND.

Inventor : PAUL JENNISON.

Application for Patent No. 459/Del/85 filed on 10th June, 1985.

Convention date 22th June, 1984/8415933/(U.K.).

Appropriate office for opposition proceeding (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-5.

3 claims

A fluid filter device capable of filtering fluid flow in one of two directions between two ports of a housing including a first generally tubular member with openings at each end and spring biased relative to the housing so that open end thereof closely seats around one said port in the manner of a check valve and a further member spring biased in the opposite direction relative to the housing to seat around the other open end of the first member in the manner of a check valve, at least one said member comprising a filter element.

Compl. Specn. 6 pages. Drg. 1 sheets.

CLASS : 32B.

161880

Int. Cl. C07c 11/18.

**PROCESS FOR SEPARATING ISOPRENE.**

Applicant : UOP INC., A CORPORATION ORGANISED UNDER THE LAWS OF THE STATE OF DELAWARE IN THE UNITED STATES OF AMERICA, WITH ITS PRINCIPAL PLACE OF BUSINESS LOCATED AT TEN UOP PLAZA, ALGONQUIN & MT. PROSPECT ROADS, DES PLAINES, ILLINOIS 60016, U.S.A.

Inventors : SANTI KULPRATHIPANJA & CHIN HSIUNG CHANG.

Application for Patent No. 920/Del/85 filed on 4th November, 1985.

Appropriate office for opposition proceeding (Rule 4, Patents Rules, 1972) Patent Office Branch, New Delhi-5.

8 claims

A process for separating isoprene from a feed mixture comprising isoprene and at least one additional hydrocarbon selected from the group consisting of isobutylene, isopentane, and pentene-1 which process comprises contacting at adsorption conditions said mixture with an adsorbent comprising activated carbon or molecular sieve carbon, selectively adsorbing said isoprene to substantial exclusion of said additional hydrocarbon, removing the non-adsorbed portion of the feed mixture from contact with the adsorbent, and thereafter recovering high purity isoprene by desorption at desorption conditions.

Compl. Specn. 19 pages. Drg. 1 sheet,

CLASS : 190-D.

161881

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972), Patent Office, Madras Branch.

Int. Cl. F 03 d 3/00.

## A WIND MILL VEHICLE.

Applicant & Inventor : KALAGATTADA SHIVAPPA BASAVARAJ, OF 670/1, MANDIPET, DAVANGERE-577 001, KARNATAKA.

Application and Provisional Specification No. 311/Mas/84 filed April 30, 1984.

Complete Specification left on April 8, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972), Patent Office, Madras Branch.

53 claims

A windmill vehicle comprising a chassis provided with power windmills fixed on the chassis facing the direction of the vehicle both in the front and back, behind the front raised portion of the chassis is fixed a battery box or a capacitor box, the power windmills are being connected to batteries or capacitors to charge them, at the downward projected portion of the chassis is fixed an electric motor coupled to the rear wheel, an electrical circuit connects the batteries or capacitors and the electric motor to make the electrical circuit a complete one, said power wind mills comprising a shaft whose one end being journaled through a clamp which is fixed to the base, the other end of the shaft is journaled in the said base between the clamp and the base are fixed a plural number of generator coils that are enclosed by a magnet fly wheel fixed to the shaft around which are fixed generator coils with an air-gap clearance between the coils and the fly wheel, the projected end of this shaft is provided with a hole, the blade assembly of the windmill is fixed on this shaft such that the screw nail of the said assembly projects in to the hole of the shaft, an "E" shaped low level chassis provided with a front, second, third and fourth vertically raised portions over the horizontal length of it, said front raised portion consisting of a headlight, steering handle, driving controls and electrical controls, the upper end of the front fork is suspended inside the hollow of the front raised tube of the chassis such that the front fork, the front wheel fixed to the other end of the fork and the steering handle rotates as one unit from left to right or right to left side of the chassis on its own axis in semicircle, said front wheel fixed to the other end of the front fork to roll freely on the road is also provided with a mudguard, front brake system and shock absorber arrangements over the second raised portion of the chassis fixed a rider seat and on the third portion is fixed a pillion seat, on the fourth "I" shaped projected end another pillion seat is fixed, beneath the horizontal chassis is fixed an electric motor coupled to a free rolling rear wheel fixed to one end of swinging arm the other end is fixed to the chassis close to the motor, a shock absorber connects the chassis and the axle of the up and down swinging rear wheel.

Prov. 3 pages; Com. 35 pages; Drwgs. 23 sheets.

CLASS : 107-G.

161882

Int. Cl. F 02 m 23/00.

## AN INLET MANIFOLD FOR AN INTERNAL COMBUSTION ENGINE.

Applicant & Inventor : MULKI HARI PRASAD SHETTY OF PLOT NO. 2, PHASE II, PEENYA INDUSTRIAL AREA, PEENYA, BANGALORE-560 058, KARNATAKA, INDIA, INDIAN NATIONAL AND (2) FOURESS ENGINEERING (INDIA) PRIVATE LIMITED, HAVING ITS REGISTERED OFFICE AT MAHALAXMI CHAMBERS, 22 BHULABHAI DESAI ROAD, BOMBAY 400 026, MAHARASHTRA, INDIA, A COMPANY DULY ORGANISED AND EXISTING UNDER THE LAWS OF THE UNION OF INDIA.

Application No. 510/Mas/84 filed July 13, 1984.

3 claims

An inlet manifold for an internal combustion engine comprising a plenum chamber, the top of which is flanged for mounting the carburettor of the engine thereon, the base of the plenum chamber dividing into runners terminating in flanges for connection to the inlet ports of the engine, characterised in that the plenum chamber has a depth of 75mm to 85mm and the distance between the centre of the plenum chamber to the faces of the runner flanges is 140 mm to 160 mm with the zones of division of the runners formed substantially flush with the wall of the plenum chamber, the runners themselves inclining from the plenum chamber from 24° to 8° to the horizontal to align the passage of air-fuel mixture therein with the inlet valves of the engine substantially in a rectilinear direction.

Compl. Specn. 7 pages, Drgs. 6 sheets.

CLASS : 40-C.

161883

Int. Cl. B 01 f 17/00.

## A COMPOSITION CONSISTING OF AN EMULSION COMPRISING WATER, A HYDROCARBON OIL AT LEAST ONE ANIONIC SURFACTANT AND OPTIONALLY AT LEAST ONE COSURFACTANT.

Applicant : INSTITUT FRANCAIS DU PETROLE, OF 4, AVENUE DE BOIS-PREAU 92502, RUEIL-MALMAISON, FRANCE, A FRENCH BODY CORPORATE.

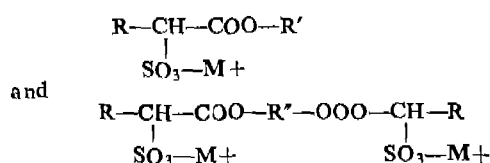
Inventors : (1) JEAN-CLAUDE MILEO, (2) BERNARD SILLION.

Application No. 515/Mas/84 filed July 17, 1984.

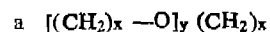
Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972), Patent Office, Madras Branch.

5 claims

A composition consisting of an emulsion comprising water, a hydrocarbon oil, at least one anionic surfactant and optionally at least one cosurfactant, wherein said at least one anionic surfactant is at least one ester of  $\alpha$ -sulfocarboxylic acid complying with the one of the general formulae :



wherein R is an alkyl or arylalkyl radical whose alkyl chain contains 5 to 25 carbon atoms, R' is an alkyl or arylalkyl radical whose alkyl chain contains 1 to 25 carbon atoms or  $\text{a } [(\text{CH}_2)_x - \text{O}]_y$  Z group, Z being a hydrogen atom, a methyl radical or an ethyl radical, X an integer from 1 to 12 and y an integer from 1 to 50, said radical R' being optionally substituted with at least one monovalent polar organic group; R'' is an alkylidene or aryl-alkylidene radical whose alkylidene chain contains 1 to 25 carbon atoms or



group wherein x is an integer from 1 to 12, y an integer from 1 to 50, and M+ is an alkali metal cation, an alkaline-earth metal half-cation or an ammonium ion,

the proportion of said at least one ester of  $\alpha$ -sulfocarboxylic acid being from 1 to 30 parts by weight per 100 parts by weight of said emulsion; and

the proportion of said at least one cosurfactant being upto 150 parts by weight per 100 parts by weight of said at least one ester of  $\alpha$ -sulfocarboxylic acid.

Compl. Specn. 13 pages, No drawings.



CLASS : 145-B+D.

161884

14 claims

Int. Cl. D 21 f 2/00.

**IMPROVEMENTS IN OR RELATING TO TWIN WIRE PAPER FORMING MACHINES.**

Applicant : BELLOIT WATMSLEY LIMITED. A BRITISH COMPANY, OF WOOD STREET, BURY, LANCA-SHIRE, BL8 2QT, ENGLAND.

Inventor : RONNIE ABRAHAM ARAV.

Application No. 529/Mas/84 filed July 20, 1984.

Convention dated 23rd July 1983, No. 83 19906 (U.K.).

Convention dated 6th June 1984, No. 84 14444 (U.K.).

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972), Patent Office, Madras Branch.

18 claims

A twin wire paper forming machine comprising a lead-in roll carrying an endless top wire which meets a bottom wire in the region of a lead-in forming box cover, the said wires pass over a foil unit which is disposed downstream of the lead-in forming box cover, down stream of the said foil unit is a trailing cover with a continuous top wire engaging surface with a leading edge to doctor water on the top wire into an auto slice, the wires then pass over a sheet transfer box whereafter the endless top wire separates from the bottom wire to pass over a drive roll and return to the lead-in roll.

Compl. Specn. 15 pages; Drgs. 2 sheets.

CLASS : 107G &amp; 145A.

161885

Int. Cl. D 06 m 1/00.

**A HIGH SWELLING GASKET COMPOSITION PARTICULARLY ADAPTED FOR USE IN CONTACT WITH HYDROCARBON OIL CONTAINING FLUIDS IN INTERNAL COMBUSTION ENGINES.**

Applicant : CUMMINS ENGINE COMPANY, INC., AN INDIANA CORPORATION OF 1000, 5TH STREET, COLUMBUS, INDIANA 47201, U.S.A.

Inventor : STEPHEN THOMAS RITCHEY.

Application No. 535/Mas/84 filed 23 July 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules 1972), Patent Office, Madras Branch.

6 claims

A high swelling gasket composition particularly adapted for use in contact with hydrocarbon oil containing fluids in internal combustion engines which will swell but not degrade upon prolonged exposure to such fluids, said composition comprising a fibrous material and as ethylene propylene rubber binder therefor, wherein said fibrous material comprises from 50 to 90% by weight of said gasket.

Compl. Specn. 14 pages Drgs. nil.

CLASS : 146-D.

161886

Int. Cl. G 02 f 3/00.

**OPTICAL IMAGE PROCESSOR.**

Applicant : QUANTUM DIAGNOSTICS, LTD., A CORPORATION OF THE STATE OF NEW YORK, UNITED STATES OF AMERICA; OF 77 ARKAY DRIVE, HAUP-PAGE, NEW YORK, U.S.A.

Inventor : CURTIS BIRNBACH & JAY TANNER.

Application No. 557/Mas/84 dated July 30, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972), Patent Office, Madras Branch.

3—457 GI/87

An optical image processor for processing non-coherent light comprising :

- (a) a collimated, two-dimensional image beam source of non-coherent light;
- (b) means for producing a subtracted output image beam including :
  - (i) first beam splitter means for dividing the image beam from said image beam source into first and second beam paths;
  - (ii) an optical delay line in said second beam path;
  - (iii) second beam splitter means for combining the image beams in said first and second beam paths, causing said image beams to destructively interfere with each other and thereby produce a subtracted output image beam; and
  - (iv) first and second focusing lenses in said first and second paths for producing generally focused images at said second beam splitter means, said first focussing lens being intentionally defocused relative to said second focussing lens;
- (c) means for sharpening edges of an image in the subtracted output image beam;
- (d) means for spatically filtering the subtracted output image beam;
- (e) means for mixing processed and unprocessed image information; and
- (f) means for housing the optical components of said processor.

Comp. Specn. 19 pages; Drwgs. 2 sheets.

CLASS : 32-E.

161887

Int. Cl. C 08 g 9/04.

**A PROCESS FOR THE PREPARATION OF WATER SOLUBLE MODIFIED MELAMINE FORMALDEHYDE RESIN.**

Applicant & Inventor : LAKSHMINARAYANAPURAM GOPALA IYER VAIDYANATHAN, NO. 19, UPSTAIRS, 4TH CROSS, SWIMMING-POOL EXTENSION, MALLES-WARAM, BANGALORE 560 003, KARNATAKA, INDIAN NATIONAL.

Application No. 555/Mas/84 filed July 30, 1984.

Complete Specification left February 1, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972), Patent Office, Madras Branch.

6 claims

A process for the preparation of water-soluble modified melamine formaldehyde resin comprising the steps of reacting melamine and formaldehyde at a pH below 7 to obtain a clear transparent solution followed by the addition of water soluble alkali metal salt of a sulphurous acid while maintaining the pH above 7, the reaction temperature being 20°C to 100°C for a period of 20 minutes to 20 hours until a viscosity of 5 centipoises to 300 centipoises (measured at 20% solid at 20°C) is obtained, the formaldehyde being present 1 mol to 6 mols per mol of melamine and the said water-soluble alkali metal salt of sulphurous acid being present 1 mol to 6 mols per mol of melamine.

Prov. 6 pages; Com. 10 pages.

CLASS : 17-F.

161888

Int. Cl. F 16 f 11/00.

REAR WHEEL SHOCK ABSORBER FOR MOTOR-CYCLES.

Applicant : KABUSHIKI KAISHA SHOWA SEISAKUSHO, A JAPANESE CORPORATION, OF 6-20, YAESU 2-CHOME, CHUO-KU, TOKYO, JAPAN.

Inventor : KIYOTO KOYAMA.

Application No. 559/Mas/84 filed July 31, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972), Patent Office, Madras Branch.

4 claims

A rear wheel shock absorber for motorcycle comprising an assembly of a hydraulic damper and a coil spring disposed around said hydraulic damper, said hydraulic damper including a hydraulic cylinder substantially coupled to one of a body frame and a rear wheel support member, a piston rod substantially coupled to the other of the body frame and the rear wheel support member, a piston attached to said piston rod and slidably fitted in said hydraulic cylinder, a rubber stopper attached to said piston rod adjacent to a proximal end thereof, and a buffer disposed around said cylinder for preventing said coil spring from contacting said cylinder said coil spring extending between spring seats on the proximal ends of said cylinder and said piston rod and having an inside diameter which is only slightly greater than an outside dimension of said rubber stopper.

Com. 8 pages; Drgs. 1 sheet.

CLASS : 187-H &amp; 206-B.

161889

Int. Cl. H 04 m 3/06.

A DIGITAL RECURSIVE AUTOMATIVE EQUALIZER.

Applicant : ITT CORPORATION (FORMERLY INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION), A CORPORATION ORGANISED UNDER THE LAWS OF THE STATE OF DELAWARE, U.S.A., OF 320, PARK AVENUE, NEW YORK 10022, STATE OF NEW YORK, UNITED STATES OF AMERICA.

Inventor : ROBERT TREIBER.

Application No. 610/Mas/84 filed August 14, 1984.

Divisional to Patent Application No. 177/Cal/87 filed on October 22, 1981.

Convention date : 22nd September, 1981 : (No. 8128571; United Kingdom).

Appropriate office for opposition proceedings (Rule 4 Patents Rules, 1972), Patent Office, Madras Branch.

8 claims

A digital recursive automatic equalizer for minimizing the error between a received input signal and an established reference to provide signal optimization/equalization of the received signal, comprising first memory means for storing a plurality of digital words representative of said received input signal, second memory means for storing a plurality of digital words representative of filter coefficients, arithmetic logic unit means having the digital words stored in said first and second memory means coupled thereto for computing and accumulating the products of the digital words in said first and second memories in a plurality of single step parallel multiply/add operations to derive a plurality of updated filter coefficients in response to a control input, control logic means for deriving said control input to control the accessing of said first and second memory means of said arithmetic logic unit and for controlling the operation of said arithmetic logic unit, and MUX/DS means for selectively coupling said automatic equalizer to one or more communication lines such that said automatic equalizer is shared by said one or more communication lines.

Compl. Specn. 35 pages; Drwgs. 8 sheets of which 33.00 cms. by 41.00 cms).

CLASS : 49-H.

161890

Int. Cl. A 47 j 27/08.

STEAM PRESSURE COOKER.

Applicant : AMCO INTERNATIONAL ALFA METAL-CRAFT CORPORATION, AG., OF BUONASERSTRASSE 30, CH-6343 ROTKREUZ, SWITZERLAND, A SWISS CORPORATION.

Inventors : (1) REINHARD VON DER BECKE & (2) HORST SCHULTZ.

Application No. 626/Mas/86 filed August 22, 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972), Patent Office, Madras Branch.

28 claims

A steam pressure cooker having a lower pot and a cover unit for pressure sealing said lower pot by means of a ring-shaped sealing element in which said lower pot has a circular, smooth pot rim angled toward the outside which pot rim from a top plan view has a continuous circular outer edge and said cover unit has a lower lid and at least one sealing element, forming an upper lid that is essentially sealed in the closed position, which is movable relative to the lower lid and said lower pot on a plane parallel to the plane of said pot rim and also has an upper rim section for engaging an outer rim portion of the lower lid and at least lower flange of the upper lid extending across about half the perimeter and engaging the lower portion of the pot rim in locking position characterized by the fact that the upper lid consists of two half-lids in which both half-lids can rotate relative to the lower lid and the lower pot about their own swivel axes which are essentially parallel to the central, vertical geometrical axis of the pot and that said swivel axes lie eccentrically to the central axis of the pot and diametrically opposite each other relative to the central axis in a swivel mechanism hinged in the middle of the lower lid.

Com. Specn. 28 pages; Drgs. 4 sheets.

## PATENTS SEALED

153619 153724 154027 154136 157895 158025 158080 158254  
158504 158575 158706 158847 158857 158858 158859 158860  
158864 158866 158867 158868 158870 158871 158873 158874  
158887 158876 158879 158880 158881 158882 158886 159153  
159154 159156 159172 159177 159178 159193 159198 159199  
159208 159213 159214 159215

REGISTRATION OF ASSIGNMENTS LICENCES ETC.  
(PATENTS)

(1)

In pursuance of an application received on 27th January, 1987 REBUILD WORLD RBWSA A LUXEMBOURG COMPANY registered as proprietors by virtue of an assignment deed dated the 14th November, 1986 and made between REBUILD WORLD RBW SA of the one part and JACQUES WYBAUW of other part in respect of Patent No. 153401.

(2)

In pursuance of an application received on 22nd May, 1987 National Research Development Corporation of India, 20-22 Zamroodpur Community Centre, Kailash Colony Extension, New Delhi-10048 registered as proprietor virtue of an assignment deed dated 26th December 1986 and made between National Research Development Corporation of India of the one part and Council of Scientific & Industrial Research of other part in respect of Patent No. 140683.

(3)

In pursuance of an application received on 20th Jan, 1987 National Research Development Corporation registered as proprietors by virtue of an assignment deed dated 16th May, 1986 and made between Director, All India Institute of Medical

Sciences of the one part and National Research Development Corporation of other part in respect of Patent No. 142668.

(4)

In pursuance of an application received on 12th November, 1986 National Research Development Corporation registered as proprietors by virtue of an assignment deed dated the 16th May, 1986 and made between Director, All India Institute of Medical Sciences of the one part and National Research Development Corporation of other part in respect of Patent No. 139454.

(5)

In pursuance of an application received on 18th November, 1987, Sh. Pawan Chetal, D-118, Street No. 6, Krishna Nagar, Safdarjung Enclave, New Delhi-110028 registered as licensee by virtue of an licence agreement deed dated 24th June 1986, and made between National Research Development Corporation of the one part and Sh. Pawan Chetal of other part in respect of Patent No. 145250.

(6)

In pursuance of an application received on 19th December, 1987 National Research Development Corporation of India is registered as proprietors by virtue of an assignment deed dated the 16th May, 1986 and made between National Research Development Corporation of the one part and The Director All India Institute of Medical Sciences of other part in respect of Patent No. 145675.

(7)

In pursuance of an application received on 20th Jan, 1987 National Research Development Corporation of India is registered as proprietors by virtue of an assignment deed dated 25th August, 1985 and made between National Research Development Corporation of India of the one part and Council of Scientific and Industrial Research of other part in respect of Patent No. 153877.

(8)

In pursuance of an application received on 20th January, 1987 National Research Development Corporation of India is registered as proprietors by virtue of an assignment deed dated the 16th May, 1986 and made between National Research Development Corporation of India of the one part and The Director, All India Institute of Medical Sciences of other part in respect of Patent No. 142429.

(9)

In pursuance of an application received on 18th November, 1987, Sh. G. Nigam, 17, Meghal Industrial Estate, 2nd Floor, Davidayal Road, Mulund (W), Bombay-400080 registered as proprietors by virtue of an assignment deed dated 5th Feb., 1985 and made between Shri G Nigam of the one part and National Research Development Corporation of other part in respect of Patent No. 144000.

(10)

In pursuance of application received on 9th December, 1985 Elekom Metals Company registered as proprietor by virtue of an assignment deed dated 15th March 1985 made between Union Carbide Corporation of the one part and Elkam Metals Company of other part in respect of Patent No. 144168.

## CHEMICAL ENG. LIST No. 2.

## COMMERCIAL WORKING OF PATENTED INVENTIONS

The following Patents in the field of Chemical Engineering Industry are not being commercially worked in India as admitted by Patentees in the statements filed by them under Section 146(2) of Patents Act, 1970 in respect of calendar Year 1986 generally on account of want of requests for licences to work the Patented inventions. Persons who are interested to work the said Patents commercially may contact the Patentees for the grant of a licence for the purpose.

Patent No.	Date of Patent	Name & Address of the Patentee	Title of the Invention
141367	19-3-1975	Union Carbide Corporation, at 270, Park Avenue, New York, State of New York-10017, U.S.A.	Improved protection for externally heated case iron vessel used to contain a Reactive molten metal.
144385	10-3-1976	Do.	Process for the preparation of low and medium density ethylene polymer in fluid bed reactor.
144829	29-3-1977	Do.	Process for polymerizing a monomer charge.
145559	30-6-1976	Do.	Improvements in adiabatic swing process for separation of gas mixtures by selective adsorption.
145670	6-1-1977	Do.	Method of preparing nickel-Rhenium Hydrogenation catalyst.
146105	29-10-1976	Do.	Process for removal of H <sub>2</sub> S from a feed gas.
146147	29-3-1977	Do.	Process for producing particulate resole from aqueous dispersion.
146241	7-4-1977	Do.	Continuous hydroformylation process.
146324	16-5-1977	Do.	Process of treating fabrics with foam.
146408	24-1-1978	Do.	Improved hydroformylation process.

1	2	3	4
146661	6-7-1977	Union Carbide Corporation, at 270, Park Avenue, New York, State of New York-10017, U.S.A.	Improvement in or relating to hydroformylation of an alpha-olefin.
146734	11-8-1977	Do.	A process for producing aldehyde products by rhodium catalyzed hydro-formylation of alpha-olefins.
146956	17-6-1977	Do.	Process for refining molten metal.
147022	20-1-1978	Do.	Method for preparing titanium modified silyl chromate catalysts for ethylene polymerization.
147225	22-9-1977	Do.	Preparation of modified and activated chromocene catalysts for ethylene polymerization.
147429	24-1-1978	Do.	Improved Hydroformylation process.
150614	13-12-1978	Do.	Process for producing particulate filler containing resole molding composition from aqueous dispersions.
150766	29-12-1979	Do.	Process for the removal of acid gas such as CO <sub>2</sub> from a hydrocarbon feed gas.
150904	17-4-1979	Do.	A continuous low pressure gas phase process for the production of solid particulate polymers and a fluidized bed polymerisation reactor therefor.
151070	30-3-1979	Do.	Preparation of ethylene copolymers in fluid bed reactor.
152087	30-3-1979	Do.	A process for preparing a catalyst composition for homopolymerizing ethylene and the catalyst composition prepared by the same.
152088	30-3-1979	Do.	Impregnated polymerization catalyst process for preparing the same and its use for ethylene copolymerization.
152141	30-3-1979	Do.	Preparation of High density ethylene polymers on fluid bed reactor.
152145	27-12-1979	Do.	A process for producing a magnesium and Titanium containing catalyst composition.
152153	30-3-1979	Do.	Process for the preparation of high density ethylene polymers in fluid bed reactor.
152450	17-11-1979	Do.	A catalytic process for producing ethylene copolymer.
152892	13-5-1980	Do.	An improved process for the purification of an industrial gas stream.
153581	6-2-1981	Do.	Compositions of alkylenealkyl acrylate copolymers having improved flame retardant properties.
153888	17-6-1980	Do.	A process for making heterogeneous Ethylene based polymers having a high tear-strength.
154420	29-6-1981	Do.	An improved silica supported catalyst composition and process for preparing the same.
154537	24-10-1980	Do.	Improvement in hydroformylation process using stable rhodium catalyst.
154876	15-7-1981	Do.	Process for the preparation of novel phosphorous Esters of cyanohydrin.

1	2	3	4
154993	4-3-1981	Union Carbide Corporation at 270, Park Avenue, New York, State of New York-10017, U.S.A.	Compositions of alkylene-alkyl acrylate copolymers having improved flame retardant properties.
155121	27-12-1979	Do.	A catalytic fluid bed process for producing ethylene polymers.
155350	15-10-1981	Do.	A process for the preparation of the bicyclooxy phenyl ureas.
149470	30-6-1978	Aksjeselskapet Norcem Haakon VII's gate 2, OSLO 1, Norway.	Process for manufacturing concrete of high corrosion resistance.
154316	2-7-1980	Anche Buzar, 25 Route De Versailles, 91570, Bievres, France.	Process for the preparation of new isoquinoline derivatives.
154317	2-7-1980	Do.	A process for the preparation of papaverine carbonion.
155158	12-12-1980	Boeinger Ingelheim Zentrale GmbH.	A process for the preparation of a sustained release formulation containing dipyridamole.
156072	8-6-1981	B.N.F. Metals Technology Centre, Grove Laboratories, Denchworth Road, Wantage, Oxfordshire, OX12 9BJ, England.	Continuous method for removing copper from lead.
156128	1-4-1981	Biogen N.V. 25, Pietermaai, Willesmastad, Curacao, Netherlands.	Method for producing a polypeptide of the I F N-B type.
150163	28-9-1978	Chemic Linz Aktiengesellschaft, St. Peter-Strasse 25, 5020 Linz, Australia.	Process for the preparation of anhydrous aluminium fluoride.
154697	14-1-1980	Ciba-Geigy AG., of Klybeckstrasse 141, 4002 Biele, Switzerland.	Process for the absorption and subsequent removal as sulphur of hydrogen sulphide from gases, gas mixtures and liquid hydrocarbons.
155028	10-10-1980	Chemic linz Aktiengesellschaft, St. Peter-Strasse 25, 5020 Linz, Austria.	A raw meal composition for use in production of Cement and sulphuric acid and a process for preparing said composition.
152009	12-4-1979	Casral Limited, Burman House, Piper's way, Swindon, Wiltshire SN3 1RE, England.	A hydraulic system containing a hydraulic fluid having a boron-silicon compound.
153679	-1-1980	CPC International, INC, International Plaza, Englewood cliffs, New Jersey-07632, U.S.A.	Process and installation for the continuous manufacture of starch adhesives.
155636	24-3-1981	Do.	Process for obtaining corn oil from corn Germs.
147590	19-12-1977	DR. Beck & Co., Ag., of 2000 Hamburg 28, Grossmannstrasse, 105, Federal Republic of Germany.	A process for the preparation of an aqueous electrically Insulating.
154556	19-8-1980	Do.	Process for the manufacture of insulat—of Germany, A company organised and thermoplastics.
154309	21-5-1980	Dyno industrier AS, Tolloygaten 22, OSLO, 1, Norway.	Cap sensitive powdered explosive composition.
148664	26-6-1978	Exxon Research and Engineering Company, of 200 Park Avenue, Flosshampark, New Jersey, U.S.A.	Lubricating oil composition and a process for preparing the same.
153421	5-12-1979	Do.	Process for converting hydrophilic Water containing regenerated cellulose membranes to membranes useful for separating organic liquids.
153466	19-12-1979	Do.	A process for preparing supported Nickel-cobalt-Silica coprecipitated catalyst.
154509	21-7-1980	Do.	Method of stabilizing isoocten polymer slurries.
152389	20-6-1979	ICI, Australia Ltd., 1, Nicholson Street Melbourne, Victoria, Australia.	An improved process for the manufacture of ammonium nitrate prills or granules.

1	2	3	4
152477	26-6-1979	I.S.C. Smelting Limited of St. James's Square, London SW1Y, 4 LD, England.	Process for producing a zinc/lead oxide product suitable for briquetting.
154014	26-3-1980	Interox, 35 Rue du Prince Albert, B-1050, Brussels, Belgium.	Process for the preparation of coated seeds.
148778	28-8-1978	Lucas Industries Public Limited Company, of Great King Street, Birmingham, B1g. 2xF, England.	Improvements in spreading disc brakes for vehicles.
151106	8-5-1979	Mitsui Toatsu Chemicals, Inc. of 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan.	An improved process for synthesizing urea from ammonia and carbon dioxide with elimination of possible explosion of the tail gas from said process.
153781	25-1-1980	Mobil Solar energy Corporation, of 16 Hickory Drive, Waltham, Massachusetts, U.S.A.	Apparatus for and method of Growing Crystalline body of silicon from a melt.
154501	22-5-1980	Do.	Method of growing a crystalline body silicon from a silicon melt.
153503	14-12-1979	National Research Development Corporation, of Kingsgate House 66/74, Victoria Street, London SW1E, GSV, England.	A method for the Sterilisation of surfaces or liquids and surfaces thus sterilised.
155595	18-3-1981	Norsk Hydro A. S. of Bygdoy Alle 2, OSLO 2, Norway.	Method and apparatus for the Gaseous reduction of Iron ore to Sponge iron.
153426	14-12-1979	OLGA MEYER AND RAINER MEYER 64, 7580, BUHL, F.R.G.	A method for producing a protective coating for cathodically protected surfaces.
153685	11-2-1980	Pfizer Inc. 235, East 42nd Street New York, State of New York, U.S.A.	Process for the preparation of penicillanic acid 1-1-deoxide and esters thereof.
154371	22-4-1980	Do.	Process for the preparation of novel penicillan derivatives.
154408	7-6-1980	Do.	Process for preparing a magnetically stable powder
154693	15-9-1980	Do.	Process for deodorizing d. aspartyl- $\alpha$ phenylalanine alkylesters.
154767	8-10-1980	Do.	Process for preparation of 6. B hydroxyalkyl penicillionce acids.
154918	8-10-1980	Do.	Process for preparation of derivatives of 6 B-Hydroxyalkylpenicillanic acids.
154926	15-10-1980	Do.	Process for the preparation of 1-oxo-1H-Thiazolo (3, 2 a), pyrimidine- 2- Carboxamides.
155384	9-3-1981	Do.	A photolytically-catalyzed process of rearranging a 2-diazo-1-oxoceph-3- EM-4-Carboxylate to a carbapen-2- EM-3- Carboxylate.
156538	23-6-1981	Do.	Process for preparing a microcapsules capable of being reconstituted by addition of Water to pharmaceutical suspension of bacampicillin.
156884	21-8-1981	Do.	A process for converting 2-Methoxyethyl, 4 Hydroxy-2-methyl-2H-1, 2-benzothiazine, -3- carboxylate 1, 1-Dioxide to piroxicam.
156975	9-6-1981	Do.	A process for the preparation of hypoglycemic 5- substituted oxazolidine-2, 4-Diols and pharmaceutically acceptable cationic salts thereof.
148734	13-4-1978	Quigley Company, Inc., of 235 East, 42nd Street, New York, State of New York, U.S.A.	Method of prolonging durable life of acid furnace Refractory linings.
148881	28-9-1978	Q Corporation, off 755 West Big Beaver Road, Suite 1610, Troy, Michigan, U.S.A.	Process for producing substantially non-polluting fuel products.

1	2	3	4
154699	22-9-1980	Rohn and hass company of Independence Mall, West, Philadelphia, PA 19105, U.S.A.	Process for tanning leather with acrylic polymer and mineral tanning agent.
145230	29-9-1977	Shell Internationale Research Maatschappij B.V. of Carel Van Bylandtlaan 30, The Hague, The Netherlands.	Process and reactor for the partial combustion of pulverized coal.
145517	18-10-1977	Do.	Process for the preparation of a hydrogen-rich gas.
145882	19-10-1977	Do.	Process for the separation of dry particulate matter from a hot gas.
146516	26-10-1977	Do.	Esterification of hydrocarbyl-substituted succinic anhydrides.
147049	21-11-1977	Do.	A process for the preparation of crystalline silicides.
147317	22-12-1977	Do.	Method of manufacturing porous Water permeable and Not frost. Susceptible tervecctta pavings usable as ground coating.
147546	19-10-1977	Do.	Improvements in a process for reactivating silver catalysts.
147547	19-10-1977	Do.	Improvements in the process for the production of ethylene oxide.
147701	21-11-1977	Do.	A process for the preparation of a catalyst composition.
147721	23-3-1977	Do.	Process for the production of ethylene oxide.
147831	22-7-1978	Do.	Process for the preparation of hydrocarbons.
148037	10-4-1978	Do.	Process for the catalytic cracking of crude petroleum fractions.
148281	27-2-1978	Do.	Process for the preparation of paraffic and olefinic hydrocarbons.
148558	14-3-1978	Do.	A process for the dehydrogenation of hydrocarbons.
150526	16-1-1979	Do.	A process for the preparation of an aromatic hydrocarbon mixture.
151186	29-1-1979	Do.	Process for the catalytic cracking of hydrocarbon oils.
155143	25-10-1977	Do.	A process for preparing cyclopropane carboxylic acid ester derivative.
155447	3-3-1981	Do.	Process for the production of an elastomeric copolymer of an aromatic vinyl compound and a conjugated diene, suitable for use in the tread portion of a pneumatic tyre.
155977	21-4-1981	Do.	Process for preparing cyclopropane carboxylic acid ester derivatives.
155978	21-4-1981	Do.	Process for preparing a mixture of cis-isomers of cyclopropane carboxylic acid ester derivatives.
146260	9-1-1978	Stamicarbon B.V. Geleen, The Netherlands.	Preparation of melamine from urea.
147228	26-10-1977	Do.	Process for separation of $\text{NH}_3$ $\text{CO}_2$ from mixtures containing them.
148047	20-2-1978	Do.	Process for the bulk chlorination of solid finely divided high density polyethylene.
148829	16-10-1978	Do.	Process for the purification of impure benzaldehyde.
150575	12-4-1979	Do.	Process for the recovery of cyclohexanone oxime.

1	2	3	4
150726	21-2-1979	Stamicarbon B. V. Geleen, the Netherlands	Process for the preparation of cyclohexanol and cyclohexanone.
151102	9-4-1979	Do.	Process for removing melamine from melamine containing liquids.
151154	16-4-1979	Do.	Process for the preparation of cyclohexanone and apparatus for carrying out the process.
151692	23-4-1979	Do.	Process for the separate recovery of ammonia and carbon dioxide from mixtures containing ammonia carbon dioxide and Water.
147648	15-6-1978	Solvay & Cie, of 33, Rue du prince Albert, B-1050 brussels, Belgium.	Process for the preparation of aqueous suspensions containing at least 65% by weight of calcium carbonate.
148102	6-2-1978	Societe Nationale Des Poudres Et Explosifs, of 12 Quai Henri IV, 75181, Paris Cedex 04, France.	Ternary explosive compositions and an explosive charge containing the same.
148695	6-3-1978	Do.	Process and apparatus for the continuous Nitration of cellulose using a Nitrating liquor comprising nitro acid, sulphuric acid and Water.
153422	5-12-1979	Do.	Combustible objects, in particular combustible cartridge cases which are heat resistant to self ignition.
156838	26-6-1981	Do.	New process for dealkylation of tertiary amines using $\beta$ -Chlorinated chloro formates.
148818	7-9-1978	Sentralinstitutt for Industriell Forskning of Forskningsvein 1, oslo, 3, Norway.	A system for concentrating Water wave energy.
153363	20-11-1979	Smiths Industries Public Limited Company, 765 Finchley, Road, London NW 11, 8DS, England.	Apparatus for detecting the presence of liquid or other flowable substance and a detect system including said apparatus.
153375	29-11-1979	Synair Corporation, of P.O. Box 1087, 17452, Irvine Boulevard, Tustin, California, U.S.A.	A method of forming a composite of urethane and rubber.
153512	21-12-1979	Southwire company of 126 Fertilla Street, Carrollton, Georgia 30117, U.S.A.	Method for manufacturing heat treatable hot formed aluminium base alloy cast bar.
153556	30-11-1979	Societe Francobelge Des Laminiers Et trefileries D' Anvers. Hemiksen, Belgium.	A process for the manufacturing of wire rods of a precipitation hardenable Al-Mg-Si alloy.
154066	7-4-1980	Societe D'Etudes e Produits Chimiques, 4 Rue, Theodule Ribot 75017, Paris, France.	Preparation of isopropylamino-pyrimidine hydroxy derivatives (mineral Base route).
154067	7-4-1980	Do.	Preparation of isopropylamino-pyrimidine hydroxy derivatives (Hydrogen reduction route).
154370	22-4-1980	Do.	A process for the preparation of halogen derivatives of isopropylamino pyrimidine.
154407	4-6-1980	Do.	Preparation of 2, Isopropylamino pyrimidine.
147000	11-11-1977	The Goodyear Tire & Rubber Company, of 1144 East Market Street, Akron, Ohio, U.S.A.	Animal drawn vehicle.
148653	5-5-1978	Do.	Process of making an adhesive.
154762	10-10-1982	Do.	Process for the synthesis of unsaturated aryl amides.



1	2	3	4
150723	16-1-1979	Toyo Engineering Corporation, 5, 2-ban, 3-Chome, Kasumigaseki Chiyoda-Ku, Tokyo, Japan.	Process for preparation of gases from heavy acts.
151159	31-10-1979	Do.	Process for preparation of urea.
154849	16-9-1980	Toyo Engineering Corporation, 2-5, Kasumigaseki, 3-Chome, Chiyodaku, Tokyo, Japan.	
		Mitsui Toatsu Chemicals Inc., 2-5, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, Japan.	A spouted bed granulation process.
151034	10-1-1979	The Board of the Rubber Research Institute of Malaysia, of 260, Jalan Ampang, Kuala Lumpur, Malaysia.	A method of stabilising held latex against coagulation.
156837	29-5-1981	The M. W. Kellogg, Company, of three Greenway Plaza, East, Houston, Texas 77046, U.S.A.	Process and apparatus for heating Hydrocarbons to Form hot Hydrocarbons reaction products in petroleum and chemical process.
147144	30-9-1977	Union Carbide Corporation at 270, Park Avenue, New York, State of New York 10017.	Renitrogenation of basic oxygen steels during decarburization.
148165	11-10-1977	Do.	A process for the production of low-carbon steel.
150476	20-11-1978	Do.	Process for the production of low-cost refined metallurgical silicon from metallurgical grade silicon.
150684	5-2-1979	Do.	An improved process for producing molten glass in a rotary furnace.
150688	21-2-1979	Do.	Process for removal of acid gas mixtures.
151100	30-3-1979	Do.	Process for separation of normal paraffins from admixture with non-normal paraffins.
151189	6-3-1979	Do.	A process for the production of methane from carbon monoxide-containing gas streams.
152304	6-6-1979	Do.	Rapid adiabatic pressure swing process for the separation of a multi component feed gas.
152316	6-6-1979	Do.	Process and apparatus for the rapid pressure swing absorption of oxygen from us.
153048	20-8-1979	Do.	A process and apparatus for producing low purity oxygen.
153376	29-11-1979	Do.	A process for recovery of hydrogen and nitrogen from gas mixtures.
153387	6-11-1979	Union Carbide Corporation, 270, Park Avenue, State of New York, 10017. & National Steel Corporation 2800 Grant Building Pittsburg State of Pennsylvania-15219, U.S.A.	A process for refining molten Steel.
153626	21-1-1980	Do.	A method for refining steel in a refractory lined vessel.
155024	22-12-1980	Union Carbide Corporation-270, Park Avenue, State of New York, 10017.	Catalytic steam reforming of hydrocarbons
155179	10-12-1980	Do.	Method of producing steel wherein slopping is prevented during subsurface pneumatic refining.

## COMMERCIAL WORKING OF PATENTED INVENTIONS

## MECHANICAL LIST-2

The following Patents in the field of Mechanical & General Engineering Industry are not being commercially worked in India as admitted by Patentees in the statements filed by them under Section 146(2) of Patents Act, 1970 in respect of calendar Year 1986 generally on account of want of requests for licence to work the Patented inventions. Persons who are interested to work the said Patents commercially may contact the Patentees for the grant of a licence for the purpose.

Patent No.	Date of Patent	Name & Address of the Patentee	Title of the Invention
1	2	3	4
155733	21-1-1977	Union Carbide Corporation, at 270, Park Avenue, New York, State of New York-10017, U.S.A.	Liquid-Liquid contacting trays adapted to be combined into a Liquid-Liquid contacting column.
152253	25-9-1979	Do.	Process for mixing liquid additives with solid materials.
149328	12-8-1977	Do.	Apparatus for refining molten metal.
147475	16-5-1977	Do.	A foam applicator head for application of foam to a substrate.
146305	16-5-1977	Do.	A foam composition for treating a fabric or papersubstrate.
148872	27-1-1978	American Flange & Manufacturing Company, Inc. of 1100 West Blancke Street, Linden, New Jersey, U.S.A.	Closure plug.
150168	26-10-1978	American Flange & Manufacturing Co, Inc. 1100, West Blancke Street, Linden, New Jersey, U.S.A.	Dispensing cartridge and closure combination.
153008	20-9-1979	Do.	Mestable moulded plastic pouring spout assembly.
151216	22-2-1979	Aktiegelskabet Nordiske Kabet og Traad-fabriker, La Cons cous Vej 7, DK-2000, Copenhagen F, Denmark.	Machine for forming a head on a shank such as a nail or a screw.
152385	14-6-1979	Amfu Ltd., 20st. Marb, Pazsonage, Manchester, Me 1 NL, England.	A fibrous board.
154287	13-5-1980	Alsthom-Allantique, of 38 Avenue Kleber, 75784, Paris Cedex 16, France.	A sludge decanter and thickner.
154341	23-6-1980	Do.	A rotor with a damper screen for for an alternator with projecting poles.
155719	31-3-1981	Austroplan Österreichische Planungsgesellschaft, m.b.H. 234, Linke Wienzeile, 1150, Vienna, Austria.	Improvement in or relating to a grinding apparatus.
148562	18-4-1978	British Insulated Callender's Cables Limited, of 21, Bloomsbury Street, London WC1B, 3QN, England.	Method and apparatus for continuously casting unrefined electrodes in Quantity for use in the electrolytic refining of metal.
152861	13-4-1981	Babcock-Moxyey Limited, Engineers, of Bristol Road, Gloucester GL1, 5RX, England.	Improvements in mechanical handling apparatus for reclaiming material from a stock-pile.
153751	19-2-1980	Biogen. N. V., of 24 Handelskade, Willenstad, Curacao, Netherlands, Netherlands, Antilles.	Improvements in or relating to Head ex-changers.
155321	22-1-1981	BICC CTD, Bloomsbury, London WC1B, 3QN, England.	Method of and apparatus for continuous friction actuated extrusion.
147493	1-11-1977	Campagnie francaise D'Etudes Et De Construction, "Technip", of 232 Avenue, Napoleon-Bonaparte, 92500 Fueil Malnaison, France.	Device for winding tubes around vertical and stationary cores.
155020	3-12-1980	Compagnie Francaise D'Etudes et de Construction, "Technip", of 170 place Henri Regnault, 92090, Paris.	Apparatus for cooling and liquefying least one gas having a low boiling point for instance natural gas.
155149	8-12-1980	Do.	Method and apparatus for cooling and liquefying a day gas having a low boiling point.

1	2	3	4
147647	2-11-1977	Canadian Ingersoll, Rand Co. Ltd., at 620, Cathcart Street, H3B, 1M2, Montreal, Quebec, Canada.	Screening apparatus Hydro foil.
148058	2-11-1977	Do.	Screening apparatus.
148099	19-12-1977	Clark & Vicario Corporation of 9620 Executive, Center Drive North St. Petersburg, Florida 33702, U.S.A.	Apparatus for cleaning and deaerating a suspension of papermaking stock.
153414	28-11-1979	Clark & Vicario Corporation, of P.O. Box 10600, Pinellas park, Florida 33565, U.S.A.	Method and apparatus for collecting and conveying liquids.
153810	12-3-1980	Do.	Apparatus for cleaning and deaerating an aqueous suspension of paper making stock.
148171	1-8-1978	Charcon Tunnels Limited, of southwell Lane, Krikby-in-Ashfield, Nottinghamshire NG 17, 8FN, England.	Improvements in or relating to wall segments.
148613	26-12-1977	Christopher Tillotson Brown, of 1, Yarraburg Road, St. Ives, New South Wales, 2075, Australia.	An improved armour unit for wave energy absorption.
156159	21-5-1981	Creusot Loire, of 42 Rue D'Anjoy, 75008, Paris, France.	Orientation mount for a solar heating module.
149383	3-10-1977	Donald Weston Bolme, of 5916, 123 RD, Avenue, Southfast, Bellevue, State of Washington, 98006, U.S.A.	A process for the removal of nitrogen oxides from industrial gases by use of oxidising solutions in which nitrates are the oxidants.
154411	8-7-1980	Dobson Park Industries Limited, Dobson Park House, Calwick Industrial Estate, Calwick, Nottingham, NG4, England.	An hydraulic telescoping Jack.
154919	13-10-1980	Do.	Mine Roof support.
147574	7-11-1977	Flogates Limited, of Sandiron House, Beauchief, Sheffield, Yorkshire S7 1RA, England.	Sliding Gate valve.
147808	29-9-1977	Do.	A sliding gate valve for a teeming vessel.
148421	2-2-1978	Do.	Improved slide gate valve apparatus.
155012	21-11-1980	Do.	A refractory article and method for making the same.
155207	8-12-1980	Flexitallic Gaskets Ltd., of station, Lane, Heckmondwike, Yorkshire, England.	Improvements in and relating to gaskets.
150829	4-4-1979	G.D. Societa Per Azioni of via pompania, 10 Bologna, Italy.	Device for forming and transferring batches of products in automatic wrapping machines.
152719	24-7-1979	Do.	Variable capacity reservoir for bar shaped elements particularly cigarettes.
152850	24-7-1979	Do.	An improved apparatus for forming and over] wrapping batches of products.
153370	26-11-1979	Do.	Device for feeding and adjusting a continuous web and for cutting it into portions.
154376	20-5-1980	Do.	Trimmer device for the tobacco filler in a cigarette manufacturing machine.
154750	3-10-1980	Do.	Strip guiding device.
154933	6-11-1980	Do.	Cigarette manufacturing machine of the continuous rod type.
155355	2-2-1981	Do.	A nodular section to be inserted as a unit into an open end spinning machine.
155890	21-4-1981	Do.	Machine for producing two continuous cigarette rods.
156214	4-3-1981	Do.	Device for fitting filters to cigarettes.

1	2	3	4
150345	6-12-1978	GIRLING LIMITED, Kings Road, Tyseley Birmingham 11, England.	Improvements in disc brakes for vehicles.
150531	19-3-1979	Do.	Improvement in disc brake for railway vehicles.
150822	9-2-1979	Do.	Improvements in fluid pressure operated brakes for vehicles.
153186	26-9-1979	GENERAL SIGNAL CORPORATION, High Ridge Park, Stamford, Connecticut 06904, U.S.A.	Butterfly valve.
146802	14-12-1977	HERCULES INCORPORATED, of Willington, Delware 19899, U.S.A.	Process for recovering oil from subterranean formations.
150679	25-1-1979	Hydra-Tight Ltd., Argyle House, Bentley Mill Close, Walsall, West Midlands WS2 CBN England.	Device for use in tightening nuts.
150528	20-2-1979	Industrie Pirelli Spa, of Cebtro Pirelli, Piazza Duca D'Aosta No. 3, Italy.	Improvements in or relating to tyres.
150689	28-2-1979	ICI AUSTRALIA LIMITED, 1, Nicholson Street Melbourne, Victoria, Australia.	A fuse device.
151967	4-1-1980	Ingersoll-Rand Canada Inc., 630 Dorchester Blvd. W. Montreal, Quebec H3B 1S6, Canada.	Pressurized screening apparatus for screening a liquid suspension.
148667	2-8-1978	John Derex Guest of Iona, Cannon Hill Way, Bray Maidenhead Berkshire, England.	Improvements in or relating to couplings for tubes.
148029	31-1-1978	Lucas Industries Public Limited Company, of Great King Street, Birmingham B15 2XF, England.	Hydraulic braking systems for vehicle.
148203	21-7-1978	Lodge-Cottrell Limited, of George Street, Parade, Birmingham B3 1QQ, England.	Improvements in or relating to fume extrac- tion.
148204	4-8-1978	Do.	Improvements in or relating to gas treatment plant.
150192	10-11-1978	Do.	Improvements in or relating to fume con- tainment.
150815	16-1-1979	Lettera Arabic S.a.r.l., Immeuble Sohat, Route Internationale de Damas-Haznneh Liban B.P. 11 2706, Beirut, Lebanon.	Apparatus for the composition of texts in arabic characters.
150818	27-1-1979	Lockheed Corporation, at 2555 North Hollywood way, burbank, California 91520, U.S.A.	Wave powered motor.
148833	30-4-1977	Mobil Solar Energy Corporation, at 16 Hickory Drive, Waltham, Massachusetts, U.S.A.	Cartridge and furnace for crystal growth.
150245	3-11-1978	Do.	Manufacture of solar cells.
151197	14-6-1979	Morgan Construction Company of 15 Belmont Street, Worcester, Massachusetts, U.S.A.	Process and apparatus for sequentially form- ing and treating steel rod.
156207	25-5-1981	Do.	High reduction method and apparatus for continuously hot rolling products.
156793	13-7-1981	Do.	Rolling Mill.
153542	5-12-1979	Marshall Richards Barcon Ltd. Grook, County Durham DL 15 8JU, England.	Improved wire drawing method and appara- tus and the wire made therefrom.
148962	6-10-1978	Nippon Clean Engine Research Institute Co., Ltd., of 205-3, Kitayasu-cho, Kanazawa-Shi, Ishikawa-Ken, Japan.	A generator blower.
153984	1-4-1980	Noyes Bros. Pty. Limited, of 12 Frederick Street, St. Leonards, New Souty Wales, 2065, Australia.	A transport vehicle.
155023	11-12-1980	National Research Development Corporation, of Kingsgate House, 66-74, Victoria street, London SW1E 6SL, England.	Improvements in or relating to the valve timing mechanism of internal combustion engines.

1	2	3	4
155878	25-3-1981	Nippon Steel Corporation, of 6-3, Otemuchi, 2-Chome, Chiyoda-ku, Tokyo, Japan.	Process and machine for bow type continuous casting.
148126	25-7-1978	Pandrol Limited, of 9 Holborn, London EC1N, 2NE, England.	Apparatus and a method for bending rods in making Railway Rail—Fastening Clips.
156775	17-12-1980	Porritts and Spencer (Asia) Ltd., of 308-9, Kanchenjunga, 18, Barakhamba Road, New Delhi, India.	Method for the production of a link belt and a link belt produced thereby.
156818	17-12-1980	Porritts and Spencer (Asia) Ltd., New Delhi, India.	Method for the production of a link belt and a link-belt produced thereby.
147272	20-3-1978	Quigley Company, Inc., of 235, East 42nd street, New York, U.S.A.	Sprayer for repairing refractory lining.
152925	9-8-1979	Q Corporation, of 755, West Big Beaver Road, Troy Michigan 48084, U.S.A.	Apparatus for extracting energy from the motion of water beneath waves in a large body of water such as an ocean or a lake.
155718	26-3-1981	Quadrant Drive B.U. of Lomboklaan.	Rotary motion transmitting device having a toothed wheel and independently movable meshing elements.
151104	1-8-1980	Ravinder Singh of Y-77 Hauz Khas, New Delhi-110016.	Improved storage container for liquid gas.
151620	15-5-1980	Ravinder Singh of Y-77 Hauz Khas, New Delhi-110016.	Improvement in or relating to an air cooler.
151621	15-5-1980	Ravinder Singh, of Y-77 Hauz Khas, New Delhi-110016.	An air cooler.
151689	11-4-1980	Ravinder Singh, of Y-77 Hauz Khas, New Delhi-110016.	A rotary irrigation sprinkle.
151699	15-5-1980	Ravinder Singh, of Y-77 Hauz Khas, New Delhi-110016.	An air cooler.
152422	23-9-1980	Ravinder Singh, of Y-77 Hauz Khas, New Delhi-110016, India.	Rotary irrigation sprinkler.
151467	27-3-1979	Robert Joseph Aresly, of 553, Pretty Brook Road, Princeton, New Jersey U.S.A.	A solar energy collector apparatus.
146871	15-12-1977	Societe pour Le Developpement Et L' Exploitation Du Palmier, Palmier a Hulle, of Ivory Coast of Boite Postale 2049, Abidjous, Ivory Coast and Bertin and Cie, of France of Boite Postale No. 3, 78370, Plaisier, France.	Apparatus for separation of the inner kernel from the shell of fruits.
147680	29-11-1977	Societe Nationale Ele Aquitaine, of Tour-Aquitaine, 92400, Courbevoie, France.	Laterally engageable flowline connector device.
149608	5-1-1978	Societe Nationale of Aquitaine, France.	A flowline connector device at a subsea station.
147789	17-11-1977	Societe D'Etudes De Machines thermiques, EMT of 2, Quai De Seine, 93292, Saint Denis, France.	A supercharger set for internal combustion Engines of reciprocating piston type.
153381	25-9-1979	Societe D'Etudes de machine Thermiques S.E.M.T. of 2, Quai De Seine, 93202 Saint Denis, France.	Improvement in or relating to a mushroom valve with forced fluid cooling, in particular for an internal combustion engine.
153625	21-1-1980	Societe D'Etudes De Machines thermiques E.M.T. of 2 Quai De Seine, Denis, France.	Cam Control device for a Four-stroke internal combustion engine.
154379	23-5-1980	Societe D'Etudes De Machines Thermiques S.E.M.T. of 2 Quai De Seine, 93202, Saint Denis, France.	Improvements in or relating to a fuel injection pump of internal combustion engine.
155862	13-4-1981	Societe D'Etudes De Machines thermiques E.M.T. of 2 Quai De Seine, 93202, Saint Denis, France.	Improvements in or relating to a piston for a reciprocating piston machine particularly an internal combustion engine.
152417	21-6-1979	Southwire Company, of 126, Fertilla Street, Carrollton, Georgia 30117, U.S.A.	Continuous copper melting furnace.
152475	22-6-1979	Southwire Company of 126, Fertilla Street, Carrollton, Georgia 30117, U.S.A.	Method for heating and melting a non ferrous metal charge in a furnace.

1	2	3	4
153003	29-8-1979	Societe Internationale De Mechanique Industrielle, S.A. 37 Rue Notre-Dame, Luxembourg.	Fluid seal assembly.
153369	23-11-1979	Stein Industries, of 19-21, Avenue Morane Saulnier 78140, relizy Villacoublay, France.	A support or fixing device for pipes.
154399	14-7-1980	Shell Internationale Research Maatschappij, B.V. Carel Van Bylandtlaan 30, The Hague, The Netherlands.	A dispenser.
154404	21-7-1980	Sulzer Brothers Limited, of CH-8401, Winterthur, Switzerland, of 5-1, Marunouchi, 2-Chome, Chiuoda,-ku, Tokyo, Japan.	Vapour generator for two fuels having different flame radiation intensity.
154507	21-7-1980	Do.	Vapour generator a partition between two combustion chambers.
154508	21-7-1980	Do.	Heat exchanger.
155357	4-2-1981	Societe Alsacienne De, Constructions Me Caniques, de mulhouse of 1 Rue de la Fonderie, 68054, Mulhouse, France.	Device for the insertion of a weft thread into the shed of a weaving loom.
155664	6-3-1981	Societa pneumatici pirelli S.P.A. of piazoale Cadorna 5, Milan, Italy.	Process for manufacturing radial tyres and radial tyres produced by the process.
146363	30-9-1977	Tesa S.A. of Rue Bugnon 38, 1020 Renens, Switzerland.	Improvements to micrometers for interior or internal measurements.
148259	13-12-1977	Tesa S.A. of Rue Bugnon 38, 1020 Reneus, Switzerland.	Flat segment level for micrometer and gauges.
148480	3-4-1978	Tesa S.A. Do.	Interior gauge for measuring the diameter of bores of machined workpiece.
148557	22-2-1978	Tesa S.A. Do.	A shock absorbing device for use in dial measuring instruments.
150169	16-11-1978	Tesa S.A. Rue Bugnon, 38, 1020 Renens, Switzerland.	Dial measurement gauge.
148060	23-12-1977	Toyota Jidosha Kogyo Kabushiki Kaisha of 1, Toyotacho, toyota-shi, Aichi, Ken, Japan.	A 2-cycle engine of an active thermoatmosphere combustion type.
152057	15-5-1979	The Goodyear Tire and Rubber Company, 1144, East Market street, Akron, Ohio, U.S.A.	Apparatus for forming traction grooves in the uncured tread of a heavy off-high way tire.
153554	8-1-1980	Do.	A heavy truck tire.
155135	16-10-1980	Do.	Cable belts for conveyors.
153395	13-11-1979	TBA Industrial Products Limited, 20 St. Mary's Parsonage, Manchester M3, 3NL, England.	A process for the production of solid woven conveyor belting and solid woven conveyor belting so produced.
153420	5-12-1979	The Laitram corporation, of 220, Laitram Lane, Harahan, Louisiana, U.S.A.	Ladder.
154511	22-7-1980	Toyo Engineering Corporation of 2-5-Kasumi-gaseki, 3-chome, chiyoda-ku Tokyo Japan. Mitsue Toatsu Chemical Inc. 2-5, address as above and l'ete.	Granule producing apparatus.
155886	16-4-1980	Toyo Engineering Corporation, of 2-5 kasaumigaseki 3-chome, Chiyoda-ku, Tokyo, Japan.	Jet layer granulator.
155035	25-11-1980	The Gillette company, of prudential tower building, Boston, State of massachusetts, U.S.A.	A razor blade assembly.
147321	27-2-1978	Union Carbide Corpn, N.r. 10017 U.S.A.	An improved liquid-gas contacting tray.
147918	16-3-1978	Union carbide.	An improved gas-liquid contacting tray.

1	2	3	4
153049	23-8-1979	Union Carbide Corporation, 270, Parle Avenue, State of New York, U.S.A.	Threaded joints.
153244	24-10-1979	Do.	Improved ultra filtration and reverse osmosis device.
153390	9-11-1979	Do.	Dry particulate inorganic, ultra-filtration membrane and production thereof.
153772	5-3-1980	Do.	Apparatus for refining molten metal.
155860	8-4-1981	Union Carbide, U.S.A.	Apparatus for refining molten aluminium.
155932	20-5-1981	Do.	Apparatus for refining molten metal particularly aluminium.
150285	12-12-1978	Uniroyal INC., at 1230, Avenue of the Americas, New York, New York 10020, U.S.A.	Improved power transmission system.
150347	7-12-1978	Do.	Pulley for use with a flexible drive belt having a plurality of tooth.
152237	30-5-1979	USS Engineers and consultants INC. of 600 Grant. street, Pittsburgh, state of Pennsylvania, U.S.A.	A removable plate assembly for use in rotary gate valve for teeming molten metal.
153103	17-9-1979	USS Engineers and consultants Inc, 600 grant, street, pittsburgh, state of Pennsylvania, U.S.A.	An apparatus for controlling the flow of liquid metal from the pour opening at a teeming vessel.

## RENEWAL FEES PAID

141071 141815 141857 142860 143791 143896 144181 145808  
 145816 146851 146884 146968 146969 147320 148419 148540  
 148915 149139 149625 150965 151875 151945 152163 152281  
 152499 152923 153580 154034 154148 154151 154201 153585  
 154654 154811 155827 155959 156042 156047 156048 156415  
 157148 157574 157662 157796 158125 158217 158274 158492  
 158494 158817 158853 158917 158918 158922 158926 158950

## REGISTRATION OF DESIGNS

The following designs have been registered. They are not open to inspection for a period of two years from the date of registration except as provided for in Section 50 of the Designs Act, 1911.

The date shown in the each entry is the date of registration of the design included in the entry.

Class 1. No. 158339. Kalyanji Shamjibhai Shah, an Indian National, Super Enterprises, House No. 1585. Near Nala, S. No. 287/2C, Saravali, At and Post Dahanu Road, District Thane, Maharashtra, India. "JUICER", 21st May, 1987.

Class 1. No. 158483. Electronic Enterprises, 39, New Okhla Industrial Complex, Okhla Phase-I, New Delhi-110020 (a sole Proprietary concern) Indian. "Constant Voltage Transformer. 1st July, 1987.

Class 1. No. 158496. Talcherkars Private Limited, (a company incorporated the provisions of companies Act) at Pushpa Kunj, Palkhi Wadi, of Kashinath Dhuru Road, Prabhadevi, Bombay-400 028, State of Maharashtra, India. "Display System". 7th July, 1987.

Class 1. No. 158495. Talcherkas Private Limited, (a company incorporated the provisions of the companies Act) at Pushpa Kunj, Palkhi Wadi, of Kashinath Dhuru Road, Prabhadevi, Bom-400 028, State of Maharashtra, India. "Display System". 7th July, 1987.

Class 1. No. 158513. Pelco Electronics & Electricals Limited, of Shivsagar Estate, Block 'A', Dr. Annie Besant Road, Worli, Bombay 400018, Maharashtra, India, an Indian Company. An "Amplideck". 9th July, 1987.

Class 1. No. 158522. Piaggio & C.S.P.A., of Via A. Cecchi 6, Genova, Italy, a company organised under the law of the Italian Republic. "Handlebars for a Scooter". 13th July, 1987.

Class 1. No. 158524. Piaggio & C.S.P.A., of Via A. Cecchi 6, Genova, Italy, a company organised under the law of the Italian Republic. "Motor Scooter". 13th July, 1987.

Class 1. No. 158525. Piaggio & C.S.P.A., of Via A. Cecchi 6, Genova, Italy, a company organised under the law of the Italian Republic. a "MOPED". 13th July, 1987.

Class 1. No. 158593. Simco Industries (India). 2740, Chhoti Bara Dari, Ballimaran, Delhi-110006, an Indian Partnership firm "Grease Gun". 31st July, 1987.

Class 3. No. 158433. WIMCO PEN COMPANY. 11, Mehta Industrial Estate, 1st Floor, I.B. Patel Road Goregaon (East) Bombay-400 063, Maharashtra, India, an Indian Partnership Firm. "Hot Case/Container". 16th June, 1987.

Class 3. No. 158465. Dunlop India Limited, Dunlop House, 57-B, Mirza Ghalib Street, Calcutta-700016, West Bengal, India, an Indian Company. "Tyre". 25th June, 1987.

Class 3. No. 158469. Peica Electronics & Electricals Limited, of Shivsagar Estate, Block 'A', Annie Besant Road, Worli, Bombay 400 018, Maharashtra, India, an Indian Company. "Amplifier Deck". 26th June, 1987.

Class 3. No. 158497. Dinesh Gurjar (Indian Nationals) at D-22 Commerce Centre, Tardeo Main Road, Bombay-400 034, State of Maharashtra, India. "Electric Base Plate". 7th July, 1987.

Class. 3. No. 158552. Choksona Private Ltd., an Indian Company of Saki Vihar Road, P.O. Box 843, Powai, Bombay-400072, Maharashtra and also at Tawala Building, Pathak Wadi, Bombay-400002, Maharashtra, India. "3 Pin Switch Plug Socket". 20th July, 1987.

Class. 3. No. 158553. Choksons Private Ltd., an Indian Company of Saki Vihar Road, P.O. Box 843, Powai, Bombay-400072, Maharashtra and also at Tawala Building, Pathak Wadi, Bombay-400002, Maharashtra, India. "Universal Socket Outlet". 20th July, 1987.

Class. 3. No. 158554. Choksons Private Ltd., an Indian Company of Saki Vihar Road, P.O. Box 843, Powai, Bombay-400072, Maharashtra and also at Tawala Building, Pathak Wadi, Bombay-400002, Maharashtra, India. "Pendent Holder". 20th July, 1987.

Class. 3. No. 15874. Prince Plastics, Churchgate Chamber, 5, New Marine Lines, Bombay-400020, Maharashtra India, an Indian Partnership firm. "RACK". 24th July, 1987.

Class. 3. No. 158575. Prince Plastics, Churchgate Chambers, 5, New Marine Lines, Bombay-400020, Maharashtra, India, an Indian Partnership firm. "STOOL". 24th July, 1987.

Class. 3. No. 158584. Wimco Pen Company, 11, Mehta Industrial Estate, 1st Floor, I.B. Patel Road, Goregaon (East), Bombay-400063, Maharashtra, India, an Indian Partnership firm. "CASSEROLE". 28th July, 1987.

Class. 3. Nos. 159021, 159022. Femina Pen Industries, 2/1, Nandaram Sen 1st Lane, Calcutta-5, West Bengal, India, an Indian Proprietary Firm. "Ball Pen". 13th November, 1987.

Class. 4. No. 158523, Piaggio & C.S.P.A., of Via A. Cecchi 6, Genova, Italy, a company organised under the law of the Italian Republic. A "Rearview Mirror". 13th July, 1987.

Class. 4. Nos. 158605, 158606. HMM Limited, an Indian Company of Patiala Road, Nabha-147201, Punjab, India. a "JAR". 31st July, 1987.

Class. 5. No. 158499. Surendra Jain (Indian National) of Mathili Corporation, Panhar, 5 Worli, Sea Face, Bombay 400 025, State of Maharashtra, India. "Carton". 7th July, 1987.

Class. 5. Nos. 158927, 158930, 158931. Munch Food Products (P) Ltd., D-992, New Friends Colony, New Delhi-110065, India a company incorporated under the Indian Companies Act, "Chocolate Box". 13th October, 1987.

Class. 10. Nos. 158578, 158579. Prem Enterprises, C-322, Mayapuri, Industrial Area, Phase-II, New Delhi-110064, (an Indian Partnership firm). "SHOE SOLE". 27th July, 1987.

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